WASTE MANAGEMENT

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

July 8, 2013

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

Mr. David Denk
NYSDEC
270 Michigan Avenue, Region 9
Buffalo, New York 14203-2999

Re: Section 404/401 and Article 24 Permit Application – Residuals Management Unit No. 2

Dear Ms. Buckler/Mr. Denk:

CWM has developed plans for construction of a new landfill, designated Residuals Management Unit No. 2 (RMU-2) at our Model City Facility. RMU-2 will provide replacement land disposal capacity once the capacity of the existing active landfill at the site is exhausted. Construction for RMU-2 is scheduled to begin during 2014 or 2015.

In order to determine the potential impacts to State and Federal wetlands within the area impacted by this project, CWM hired **edr** Companies (EDR) to perform wetlands delineation. In 2002 and 2009, EDR determined that the proposed area of RMU-2 and relocated facilities does not impact any NYSDEC-regulated wetlands and contains less than 2 acres of federal wetlands, all of which may be considered jurisdictional waters of the United States pending verification by USACE. EDR updated the RMU-2 wetlands delineation in April 2011 and July 2012 to include areas within the RMU-2 development area that were not included in the previous delineations. Again, EDR concluded that the RMU-2 project would have no impact to state wetlands and impact less than 2 acres of federal wetlands, pending confirmation by the USACE.

A jurisdictional determination was received from the USACE on September 13, 2011. The USACE jurisdictional determination indicated that approximately 2.5 acres of jurisdictional wetlands are located within the RMU-2 development area. The wetlands were identified and delineated based on the presence of hydrophytic vegetation, hydric soils and indicators of wetland hydrology.

The area proposed for the RMU-2 site is approximately 43.5 acres, plus additional acreage for Fac Pond 5 and associated facilities, with approximately 2.5 acres of federal wetlands that would be impacted due to construction and operations. The wetlands delineated by EDR and the USACE consist of man-made roadside ditches and isolated pockets of wetland areas which provide limited function and value (primarily stormwater detention and flood storage). The limited function and value is due to the small size, shallow depth and seasonal inundation/saturation of these delineated wetlands. The wetlands on site provide no aesthetic, recreational, or educational value and appear to have little, if any, groundwater recharge or discharge function. The wetlands have little beneficial effect on water quality and do not provide spawning areas for fish, waterfowl habitat or shoreline erosion control. The wetlands also provide limited value for wildlife due to the lack of habitat diversity, water level fluctuations and adjacent land development.

During the detailed design of the site grading plan for a New Drum Management Building as part of the RMU-2 project, a supplemental wetlands delineation was performed in the proposed area by EDR in July 2012. The supplemental delineation indicated that a wetland on the north side of the development area extends beyond the delineated area and outside of the study area into an NYSDEC-protected wetland (RV-8).

On November 7, 2012, CWM subsequently requested a jurisdictional determination from the NYSDEC that no state freshwater wetlands would be impacted by the construction of RMU-2, including the New Drum Management Building area. Based on a field delineation by an NYSDEC wetlands biologist, the NYSDEC determined that a portion of the new Drum Management Building Development will be in the 100-adjacent area of a state freshwater wetland (RV-8). Additionally, the NYSDEC issued a determination on February 4, 2013 that no other state freshwater wetlands or 100-adjacent areas are in the RMU-2 development area.

To mitigate for the unavoidable permanent loss of wetlands within the Project area, CWM is proposing the creation of a 4.3-acre successional wetland on a 21-acre parcel of land owned by CWM immediately west of the Fac Ponds 1 & 2. This parcel is currently dominated by successional deciduous forest, but also includes areas of disturbed land used for topsoil stockpiles, successional old field, and approximately 5 acres of forested and emergent wetland communities. The successional wetlands to be created on-site will be designed to succeed from scrub-shrub into forested wetlands. This represents a mitigation ratio of approximately 1.7 to 1 (mitigation to impact) for direct impacts to wetlands/streams.

CWM shall place a perpetual deed restriction, in the form of a conservation easement, on the mitigation site to protect the compensatory wetland mitigation area and adjacent uplands in perpetuity and guarantee its preservation. The conservation easement will protect a total of 15.94 acres.

The mitigation of impacts to the 100-foot adjacent area for development of the New Drum Management Building will be accomplished by the construction and maintenance of a vegetated buffer between the buildings operational area and the New York State Freshwater Wetland RV-8.

CWM would greatly appreciate an expeditious review of the attached information and permit issuance to enable CWM to meet the construction schedule stated above. Applications for other state and federal permits required for RMU-2 were previously submitted by CWM, to the NYSDEC and the USEPA and are currently under review.

If you have any questions, please contact myself at (716) 286-0246 or Mr. Jonathan Rizzo at (716) 286-0354.

"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: M. Passuite - NYSDEC/Region 9
C. Rosenburg - NYSDEC/Region 9
B. Rostami - NYSDEC/Region 9
J. Strickland - NYSDEC/Region 9
M. Cruden - NYSDEC/Albany, NY
G. Burke - NYSDEC/Albany, NY
M. Mortefolio - NYSDEC/Albany, NY
On-site Monitors- NYSDEC/ Model City, NY
A. Park - USEPA/Region II
P. Flax - USEPA/Region II
N. Azzam - USEPA/Region II
J. Devald - NCHD/Lockport, NY
M. Mahar - CWM/Model City, NY
J. Rizzo - CWM/Model City, NY
S. Rydzyk - CWM/Model City, NY
J. Hecklau - EDR/Syracuse, NY
EMD Subject File
Q & A

Joint Application for Permit

Submitted to the Buffalo District Office of the US Army Corps of Engineers
and Region 9 of the New York State Department of Environmental Conservation

for the

Residuals Management Unit 2

Town of Porter, Niagara County, New York

Prepared for:

CWM Chemical Services, LLC
1550 Balmer Road
Model City, New York 14107

Prepared by:

edr Companies
274 North Goodman Street
Rochester, New York 14607

July 2013

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LIST OF TABLES

LIST OF APPENDICES

JOINT APPLICATION FORM

For Permits/Determinations to undertake activities affecting streams, waterways, waterbodies, wetlands, coastal areas and sources of water supply.

New York State

You must separately apply for and obtain separate Permits/Determinations from each involved agency prior to proceeding with work. Please read all instructions.

US Army Corps of Engineers (USACE)

APPLICATIONS TO

1. NYS Department of Environmental Conservation

Check all permits that apply:

- ☐ Stream Disturbance
- ☐ Excavation and Fill in Navigable Waters
- ☐ Docks, Moorings or Platforms
- ☐ Dams and Impoundment Structures
- ☑ 401 Water Quality Certification
- ☑ Freshwater Wetlands
- ☐ Tidal Wetlands
- ☐ Coastal Erosion Management
- ☐ Wild, Scenic and Recreational Rivers
- ☐ Water Supply
- ☐ Long Island Well
- ☐ Aquatic Vegetation Control
- ☐ Aquatic Insect Control
- ☐ Fish Control
- ☐ Incidental Take of Endangered/Threatened Species

☑ I am sending this application to this agency.

2. US Army Corps of Engineers

Check all permits that apply:

- ☑ Section 404 Clean Water Act
- ☐ Section 10 Rivers and Harbors Act
- ☐ Nationwide Permit(s) - Identify Number(s): _____

Preconstruction Notification - ☐ Y / ☐ N

☑ I am sending this application to this agency.

3. NYS Office of General Services

Check all permits that apply:

- ☐ State Owned Lands Under Water
- ☐ Utility Easement (pipelines, conduits, cables, etc.)
- ☐ Docks, Moorings or Platforms

☐ I am sending this application to this agency.

4. NYS Department of State

Check if this applies:

- ☐ Coastal Consistency Concurrence

☐ I am sending this application to this agency.

5. Name of Applicant (use full name)

CWM Chemical Services, LLC

Mailing Address: 1550 Balmer Road

Post Office City: Model City

State: NY Zip Code: 14107

Applicant must be:

- ☑ Owner
- ☑ Operator
- ☐ Lessee

(check all that apply)

Taxpayer ID (If applicant is NOT an individual):

Telephone (daytime): 716-286-0241

Email: mmahar@wm.com

6. Name of Facility or Property Owner (if different than Applicant) N/A

Mailing Address:

Post Office City:

State: Zip Code:

Telephone (daytime):

Email:

7. Contact/Agent Name

Company Name:

Mailing Address:

Post Office City:

State: Zip Code:

Telephone (daytime):

Email:

8. Project / Facility Name

Residuals Management Unit 2

Property Tax Map Section / Block / Lot Number

61.00-2-1
60.00-3-9.2

Project Location - Provide directions and distances to roads, bridges and bodies of waters:

See Figures 1 and 2 in Appendix A.

Street Address, if applicable: 1550 Balmer Road

Post Office City: Youngstown State: NY Zip Code: 14174

Town / Village / City: Town of Porter

County: Niagara

Name of USGS Quadrangle Map: Ransomville

Stream/Water Body Name: Twelvemile Creek

Location Coordinates: Enter NYTMs in kilometers, **OR** Latitude/Longitude

NYTM-E	NYTM-N	Latitude	Longitude
		43°13'26.4"	-78°58'28.6"

For Agency Use Only DEC Application Number: USACE Number:

JOINT APPLICATION FORM - PAGE 2 OF 2

Submit this completed page as part of your Application.

9. **Project Description and Purpose:** Provide a complete narrative description of the proposed work and its purpose. Attach additional page(s) if necessary. Include: description of current site conditions and how the site will be modified by the proposed project; structures and fill materials to be installed; type and quantity of materials to be used (i.e., square ft of coverage and cubic yds of fill material and/or structures below ordinary/mean high water) area of excavation or dredging, volumes of material to be removed and location of dredged material disposal or use; work methods and type of equipment to be used; pollution control methods and mitigation activities proposed to compensate for resource impacts; and where applicable, the phasing of activities. **ATTACH PLANS ON SEPARATE PAGES.**

See attached narrative.

Proposed Use: ☐ Private ☐ Public ☑ Commercial	Proposed Start Date: 2014	Estimated Completion Date: 2019
Has Work Begun on Project? ☐ Yes ☑ No If Yes, explain.		
Will Project Occupy Federal, State or Municipal Land? ☐ Yes ☑ No If Yes, please specify.		

10. List Previous Permit / Application Numbers (if any) and Dates:

92-986-78 (2/24/1993), 2000-01534(0) (8/30/2000), 2000-1524 (3) (2/21/2003), 2000-01534(6) (submitted 11/18/2003 and 7/6/2009)

11. Will this project require additional Federal, State, or Local Permits including zoning changes? ☑ Yes ☐ No If yes, please list:

TSCA Authorization, 6 NYCRR Part 210, 6 NYCRR Part 373, 6 NYCRR Part 361, 6 NYCRR Part 750, Town of Porter Building Permit, Town of Porter Special Use Permit, Town of Porter Site Plan Approval

12. **Signatures.** If applicant is not the owner, both must sign the application.

I hereby affirm that information provided on this form and all attachments submitted herewith is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law. Further, the applicant accepts full responsibility for all damage, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and agrees to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from said project. In addition, Federal Law, 18 U.S.C., Section 1001 provides for a fine of not more than $10,000 or imprisonment for not more than 5 years, or both where an applicant knowingly and willingly falsifies, conceals, or covers up a material fact; or knowingly makes or uses a false, fictitious or fraudulent statement.

Signature of Applicant	Michael D. Mahar Printed Name	District Manager Title	7/08/2013 Date
Signature of Owner	Printed Name	Title	Date
Signature of Agent	Printed Name	Title	Date

For Agency Use Only **DETERMINATION OF NO PERMIT REQUIRED**

_____ (Agency Name) has determined that No Permit is required from this Agency for the project described in this application.

Agency Project Number _____

Agency Representative: Name (printed) _____ Title _____

Signature _____ Date _____

Joint Application Information

1.0 OVERVIEW AND PROJECT PURPOSE

CWM Chemical Services, LLC (CWM or the Applicant) is proposing a 43.5-acre expansion of the existing CWM Model City Hazardous Waste Management Facility (Model City Facility), located in the Town of Porter, Niagara County, New York (see Appendix A, Figure 1). This expansion is needed in order to allow continued disposal of hazardous and industrial nonhazardous waste at the Model City Facility because the currently active landfill (Residuals Management Unit 1, or RMU-1), the only commercial land disposal facility in the northeast United States, is approaching full capacity. The proposed expansion will occur within a currently developed/disturbed portion of the Model City Facility, and will be designated Residuals Management Unit 2 (RMU-2). Structures that are currently located in the proposed RMU-2 project area will be relocated within the Model City Facility.

RMU-2 is designed so that it would be constructed in phases (over numerous seasons) in an effort to minimize future construction and operation conflicts. The landfill is divided into six cells, each capable of functioning as an independent disposal unit with respect to leachate collection and pumping. Construction of the first cell is anticipated to commence in 2014.

The proposed location of RMU-2 currently includes the existing Emergency Response Garage, Drum Management Building, Full and Empty Trailer Parking Areas, Heavy Equipment and Facility Maintenance Building, Facultative (Fac) Ponds 3 and 8, various site roadways, surface-water drainage ditches and utilities. In addition to construction of the RMU-2 facility itself, the proposed Project consists of relocation of existing facilities, installation of new drainage ditches, culverts, access roads and ramps, closure of Fac Ponds 3 and 8, upgrade of Fac Pond 1/2, and construction of proposed Fac Pond 5. Areas that will be disturbed by these activities cumulatively total 71 acres, hereafter referred to as the Project Site.

edr Companies (edr) wetland biologists conducted on-site wetland and stream investigations at the Model City Facility during the Spring of 2009, 2011 and 2012. edr delineated all wetlands/waterbodies within both the Project Site and potential off-site and on-site wetland mitigation areas. Wetland delineations were conducted in accordance with the U.S. Army Corps of Engineers (USACE) approved methodology. A Wetland Delineation Report prepared for the Project Site was submitted to the USACE in June of 2009, a Supplemental Delineation Report was submitted to the USACE in April 2011, and a jurisdictional determination (JD) was issued by the USACE on September 13, 2011 (see Appendix B). An additional Supplemental Delineation Report was submitted to the USACE and NYSDEC in November 2012 (edr, July 2012) due to revisions to the project area limits. A Wetland Delineation Report for the currently proposed on-site wetland mitigation area is included in Appendix C.

The proposed Project requires excavation and development of large contiguous areas of land, which limits opportunities for minimizing/avoiding wetland impacts. However, most of the wetlands on-site are man-made drainage features which are characterized by surface water hydrology and/or vegetation that have been historically altered to such an extent that limited wetland functions and values have been retained. No previously undisturbed wetlands or wetlands providing significant ecological functions and values will be impacted by the proposed Project. Based upon Project design and engineering completed to date, construction activities will result in permanent loss of 2.567 acres of federally-jurisdictional wetlands. No temporary disturbance to wetlands or conversion of forested wetlands to other wetland communities will occur. No NYSDEC freshwater wetlands will be impacted; however a portion of the 100' Adjacent Area Buffer for NYSDEC Wetland RV-8 will be impacted due to the relocation of the Drum Management Building. Therefore, the Applicant is submitting this Joint Application for Permit to the USACE in accordance with the conditions of Nationwide Permit Program (NWP) and to the NYSDEC in accordance with Section 401 of the Clean Water Act and New York State Environmental Conservation Law (ECL) Article 24 (Freshwater Wetlands).

2.0 PROJECT SITE DESCRIPTION

The Model City Facility is situated along Balmer Road, 1.9 miles east of the intersection of Balmer Road and Creek Road (NYS Route 18) in the Towns of Porter and Lewiston, New York. The nearest population concentrations are the Village of Lewiston, approximately seven miles to the southwest; the Village of Youngstown, approximately three miles to the northwest and the Hamlet of Ransomville, approximately two miles to the east. The Model City Facility occupies approximately 710 acres, including 630 acres of land in the Town of Porter and 80 acres of land in the Town of Lewiston, however, all existing treatment, storage and disposal facilities are located within the Town of Porter. RMU-2 would also be located in the Town of Porter in an area of the Model City Facility immediately adjacent to the western edge of existing RMU-1 (see Appendix A, Figure 2).

The Project Site is located approximately four miles south of Lake Ontario and is within the Ontario Plain section of the Central Lowland physiographic province of New York. The Ontario Plain extends from the shore of Lake Ontario to the foot of the Niagara Escarpment. Elevation of this province within Niagara County ranges from 250 feet above mean sea level (amsl) along the lakeshore to 390 feet amsl located at the base of the Niagara Escarpment located in the Town of Lewiston, New York (NRCS, 1972). Topography within the Project Site is relatively level, and varies from approximately 310 feet amsl to approximately 325 feet amsl (Appendix A, Figure 3). Land uses in the vicinity of the Site include a municipal landfill, a United States National Guard training area, disturbed but undeveloped woodlands, rural residential areas and agricultural lands.

Existing plant communities were identified and characterized through interpretation of aerial photographs, reconnaissance-level field surveys, and wetland/stream delineation surveys. The Project Site consists largely of previously disturbed/developed land, and therefore lacks significant areas of natural vegetation. On-site vegetation can be characterized as maintained (regularly mowed) old-fields with interspersed patches of maintained lawn, deciduous forestland and shrubland vegetative communities. In addition, a number of small wetland communities exist on-site, including emergent, emergent/scrub-shrub, emergent/scrub-shrub/forested, and scrub-shrub forested wetlands. However, the majority of on-site water features are essentially drainage ditches that are part of the man-made stormwater management system (see additional discussion below).

NYSDEC stream mapping indicates that one Class C unprotected stream occurs within the Project Site. This stream is an unnamed tributary of Four mile Creek and occurs within the Oak Orchard-Twelvemile NYSDEC hydrologic unit (04130001), which is part of the Southwestern Lake Ontario drainage basin. Wetland delineations conducted on-site have determined that this mapped stream is in actuality a series of forested and emergent wetlands connected by drainage features, rather than the natural stream channel as indicated on NYSDEC mapping. Activities that would alter or disturb this stream, and/or hydrologically connected wetlands, require a permit from the USACE under

Section 404 of the Clean Water Act. NYSDEC does not regulate Class C streams, therefore a permit under Article 15 of the ECL is not required.

Review of NYSDEC mapping indicates that there are no NYSDEC-mapped wetlands regulated under Article 24 located within the Project's limit of disturbance (see Appendix A (Figures) and Appendix D (Site Plans)). However, a portion of state regulated Wetland RV-8's 100 foot Adjacent Area Buffer is within the Project's limit of disturbance and will be permanently impacted as a result of project construction.

Review of NWI mapping indicates that multiple federally mapped wetlands occur in the surrounding area, three of which occur within the Project Site. Each of these wetlands are classified as PUBKHx (Palustrine, Unconsolidated Bottom, Artificially Flooded, Permanently Flooded, and Excavated) and correspond to Facultative Ponds, which are man-made reservoirs constructed to store treated waste water. One additional federally mapped wetland, identified as PFO1/4Bd (Palustrine, Forested, Broad-Leaved Deciduous, Forested, Needle-Leaved Evergreen, Saturated, and Partially Drained/Ditched) is located immediately adjacent to the Project Site.

As mentioned previously, edr wetland biologists conducted wetland and stream investigations on the Project Site during the Spring of 2009, 2011 and 2012. The 15 delineated wetland areas within the Project Site cumulatively totaled approximately 3.25 acres and were primarily emergent communities dominated by common reed and sedges, as well as a scrub-shrub communities dominated by silky dogwood and willows. Only three wetlands identified by edr personnel included forested communities. The wetlands were all characterized by hydric soils and clear indicators of wetland hydrology at the time of Site investigation. Eight of these areas are associated with stormwater management system (SPDES Permit # NY 0072061) and do not offer the structural or functional attributes inherent to natural waters of the U.S. The USACE has determined that the majority of these wetlands are jurisdictional Waters of the U.S., and that any filling of these wetlands would require a permit from the USACE under Section 404 of the Clean Water Act (see JD in Appendix B).

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

The three on-site Facultative Ponds previously mentioned are not considered to be jurisdictional waters of the U.S. No data was collected for these areas, as they are considered engineered components of the working Model City Facility, and not jurisdictional waters of the U.S. (see JD in Appendix B).

3.0 PROJECT DESCRIPTION

The proposed RMU-2 facility totals 43.5 acres in size, providing additional hazardous and industrial non-hazardous waste landfill capacity to allow continued waste disposal at the Model City Facility. It is designed to be a secure waste residuals management unit employing state-of-the-art design and operating technology, incorporating primary and secondary liners and independent primary and secondary leachate collection and pumping systems. The liners incorporate compacted clay and synthetic components. The leachate collection systems consist of drainage nets, synthetic filters and granular material. The leachate pumping systems consist of submersible centrifugal pumps and discharge pipes with automatic or manual operation. RMU-2 would be constructed and operated in phases as disposal capacity is needed. The proposed location of the unit is on hydrogeologically suitable land that meets the requirements contained in 6 NYCRR Part 373-2.14 (b)(1)- (3).

Waste quantities to be accepted by RMU-2 are expected to be similar to those accepted in RMU-1; currently 10,000 to 15,000 tons per month. Considering separation berms, daily cover and access roads, the net waste capacity, as calculated in the *RMU-2 Engineering Report* is 3,934,000 cubic yards (ARCADIS, 2013). Based upon the current rate of waste receipts, the active life of the RMU-2 would be approximately 20 to 25 years. The design of RMU-2 is similar to past on-site landfills having double-composite liner systems, most notably, RMU-1. RMU-2 would be bounded by a perimeter berm to control stormwater runon and runoff. RMU-2 would be divided into six cells with intercell berms constructed of compacted clay. The cells would be constructed on an as-needed basis to match the operational aspects of the facility based upon waste receipts. The floor of each cell would be sloped at a minimum of 1.0% (post- settlement) towards the cell centerline and ultimately to a leachate collection sump. Along the perimeter of RMU-2, the top of final cover grades would extend from the perimeter anchor trench at a 3(horizontal):1(vertical) slope to a grade break occurring at an elevation ranging from approximately 420 feet amsl to 432 feet amsl and then at 5% to 440 feet amsl (approximately 120 feet above existing surface grades). The RMU-2 design incorporates NYSDEC-required safety factors for stability under static and seismic conditions.

The proposed service area of RMU-2 is expected to be similar to that of RMU-1. The majority of the waste accepted would originate from the northeast, mid-Atlantic and central regions of the United States (most areas east of the Mississippi River). Some waste may also be received from Canada and Puerto Rico. The majority of the waste is expected to be generated from environmental site remediation efforts and Industrial treatment processes creating residual wastes. Only hazardous wastes, waste treatment residuals that meet USEPA and NYSDEC Land Disposal Restrictions, Corrective Action Management Unit-eligible wastes and industrial non-hazardous wastes would be accepted for disposal in RMU-2. CWM does not accept municipal solid wastes at the Model City Facility.

Site preparation for RMU-2 would include:

1. Relocation of existing Model City Facilities and operational areas, such as the Stabilization and Full Trailer Parking Areas, Emergency Response Garage, Drum Management Building and the Heavy Equipment/Facility Maintenance Building from within the proposed RMU-2 footprint to new locations within the Model City Facility.
2. Minor clearing and grubbing of existing vegetation and stripping of topsoil; topsoil would be stockpiled at another location on the CWM property.
3. Installation of temporary and permanent drainage ditches and culverts.
4. Construction of perimeter drainage swales for control of surface runon and runoff.
5. Construction of access ramps and roads at the perimeter to facilitate waste filling activities.
6. Abandonment of groundwater monitoring wells and piezometers within the footprint of RMU-2.
7. Removal and relocation of existing utilities and communications services.
8. Closure of Fac Ponds 3 and 8.
9. Upgrade to Fac Pond 1/2.
10. Construction of new Fac Pond 5.

Construction will include installation of the landfill sub-base, base (comprised of a primary and secondary liner system and a primary and secondary leachate collection system), perimeter berms, intercell berms, modification of adjacent existing perimeter berms, and installation of a low-permeability cutoff wall.

The relocated Drum Management Building will require site grading for the construction of the building and its associated infrastructure. The facility will include a Covered Truck Loading and Unloading Ramp, Covered Drum Building Fuels Transfer Ramp, Fuels Pumping Area, Transformer Flush Area, Fuels Pumping Area, Bladder Tank Area and Fire Protection, Drum Management Area, Office Area, and associated asphalt paved parking and access drives/work area. Additional structures associated with the Drum Management Building are concrete walk ways and retaining walls along the covered ramps, as well as several steel bollards.

Once operational, approved daily cover materials, as defined by 6 NYCRR370.2(b)(39), would be sufficiently applied to cover all areas of exposed waste at the end of each day of operation. With respect to the final cover system for RMU-2, final cover consists of the following components (in descending order):

- 6 inches of vegetated topsoil;
- 18 inches of general soil fill;
- A layer of geocomposite;
- A 40-mil textured HDPE geomembrane;

- A GCL layer that provides a maximum equivalent hydraulic conductivity equal to or less than 2 feet of compacted clay with a hydraulic conductivity of 1 x 10-7 cm/sec; and
- 6 inches of general soil fill to be used as a grading layer.

The final cover slope is designed as 3 (horizontal):1 (vertical) with a minimum top slope of 5% that allows for gravity drainage of stormwater under post-settlement conditions.

The design philosophy behind the double-composite liner system proposed for RMU-2 is to provide an additional measure of environmental protection against contaminant migration by providing leachate collection above and between the liners. The primary leachate collection system above the top liner is intended to minimize the amount of leachate on the liner system and to remove liquids. The secondary leachate collection system is intended to collect and remove any liquids infiltrating into the space between the liners from the landfill or from the groundwater, as well as to provide for long-term minimization of migration of hazardous constituents through the closed unit. USEPA regulations require a composite liner system of "synthetic and compacted clay components" for only the lower liner. The design for RMU-2 has provided an additional environmental safeguard by incorporating the composite approach for both the primary and secondary leachate collection systems. Collected leachate would be sampled and analyzed for hazardous waste constituents and processed at Model City Facility's existing wastewater treatment plant.

With respect to surface water, during construction, surface water would be directed to the Model City Facility's existing surface-water collection system, which is monitored for hazardous constituents according to the Model City Facility's *Surface-Water Sampling and Analysis Plan included as Attachment M of CWM's 6 NYCRR Part 373 Sitewide Permit* and discharged in accordance with the individual SPDES Permit. During operation of RMU-2, precipitation entering the cells would be collected in the leachate collection system and sampled/analyzed/processed at the Model City Facility's existing wastewater treatment plant. All surface-water runoff from the final cover system would be directed to the existing stormwater management system and retention basins.

4.0 JURISDICTIONAL IMPACTS

The proposed Project requires excavation and development of large contiguous areas of land, which limits opportunities for minimizing/avoiding wetland impacts. No wetlands providing significant ecological functions and values will be impacted by the proposed Project. Impacts to wetlands and other Waters of the U.S. anticipated to result from Project activities are described below.

4.1 Temporary Wetland/Stream Impacts

No temporary impacts to wetlands or streams will result from construction of the proposed Project.

4.2 Permanent Wetland/Stream Impacts

The Project Site boundary is also the limit of disturbance for the proposed Project. As a result, all jurisdictional wetland areas within the Project Site, totaling 2.567 acres, will either be permanently filled or excavated during Project construction. These impacts are summarized in Table 1 and depicted in Figure 4.

Table 1. Permanent Impacts to Wetlands and Streams

Wetland ID	Community Type	Permanent Impact (Square Feet)	Permanent Impact (Acres)	Permanent Adjacent Area Impact (Square feet)	Figure 4 Sheet Reference
G	PEM	17,052.5	0.391	--	1
	Drainage	793.4	0.018		
H	PEM	1,596.3	0.037	--	1
I	PEM	1,406.9	0.032	--	2
	Drainage	3,017.3	0.069		
J	PFO	19,779.1	0.454	--	3 and 4
	PEM Drainage	15,599.8	0.358		
K	PEM	14,630.4	0.336	--	2 and 3
	Drainage	11,384.3	0.261		
M	PFO	11,627.3	0.267	--	4 and 5
	PSS	1,560.6	0.036		
	PEM	1,887.3	0.043		
	Drainage	12,341.2	0.283		
N	PEM	46.4	0.001	--	6
	Drainage	702.1	0.016		
O	PFO	615.0	0.014	--	5
	PSS	531.7	0.012		
	Drainage	360.1	0.008		
Drum Wetland	PFO	--	--	32,171	7
	Total: 111,808 Square Feet (2.567 Acres) Community Type (Acres) - PFO: 0.734 , PSS: 0.048, PEM: 0.84, PEM Drainage: 0.358, Drainage: 0.587				

Notes: PSS = Palustrine Scrub-Shrub Wetland; PEM = Palustrine Scrub-Shrub Wetland; PFO = Palustrine Forested Wetland.

A full description of these wetland community types is provided in the 2009 Wetland Delineation Report and the 2011 and 2012 Supplemental Delineation Reports.

4.3 Conversion of Forested Wetland to Non-forested Wetland Types

No conversion of forested wetlands to other non-forested wetland communities will occur as a result of construction of the proposed RMU-2 facility. All proposed impacts involve the placement of fill or culverts within on-site wetlands and drainages.

4.4 Summary of Impacts

In summary, based on Project design and engineering completed to date, construction activities will result in permanent loss of 2.567 acres of federally-jurisdictional wetlands and 0.74 acre of NYSDEC 100-foot adjacent area buffer. No temporary disturbance to wetlands or conversion of forested wetlands to other wetland communities will occur. No NYSDEC protected streams or freshwater wetlands will be impacted.

5.0 ALTERNATIVES ANALYSIS

The Applicant looked at the following alternatives to the proposed action in the Draft Environmental Impact Statement (DEIS) (Arcadis, 2013):

- No action;
- Action at a different location within the Model City Facility;
- Action at a different site;
- Different technological approach; and
- Design sub-alternatives.

These alternatives, along with the no action alternative, are described below.

5.1 No Action Alternative

Under the No Action Alternative, hazardous waste processing and disposal operations presently conducted at the Model City Facility would continue with no further commitments to modify the Model City Facility's existing capabilities. Implementation of this alternative would exhaust land disposal capacity at the Facility by approximately 2015 based on current waste receipt rates. While this alternative would eliminate all on-site wetland impacts, there are several drawbacks to this alternative. Some likely impacts of the No Action Alternative would include:

- Hazardous waste generated in NYS and requiring land disposal would need to be shipped out-of-state.
- Decreased competition in the waste land disposal market and added transportation costs will result in increased disposal costs to NYS companies, placing an additional economic burden on those companies.
- With increased transportation and disposal costs, there may be an increase in illegal disposal of hazardous wastes.
- Disposal at facilities outside of NYS would result in longer hauling distances, increased fuel consumption and larger greenhouse gas emissions.
- Denial could jeopardize New York's status as a RCRA-delegated state because of 40 CFR 271.4(f).
- The majority of economic benefits associated with the Model City Facility (over $13 million per year to state and local economies through various taxes, fees and expenditures) would be eliminated or significantly reduced.

Furthermore, the No Action Alternative would fail to achieve the Project's purpose and need.

5.2 Action at a Different Location within the Model City Facility

Locating a new landfill and other hazardous waste units within the existing Model City Facility would be limited to the property that is currently zoned for such activity (i.e., M-3 zone in the Town of Porter). Existing M-3 areas are largely utilized by active and closed waste management units. The proposed location for RMU-2 represents the only feasible area within the central portion of the Model City Facility meeting the zoning requirements.

On October 10, 2001, the Town of Porter Town Board approved the rezoning of 75 acres of CWM's property east of RMU-1, known as the "Eastern Area," from zone M-2 to M-3. Although the Eastern Area could be used for RMU-2, this area is further from the site infrastructure and would result in increased wetland impacts, as well as increased visual impacts. Other disadvantages of this alternative include:

- Overall costs would be increased to the point of being significantly less economical;
- This alternative would require the need to relocate existing facilities more critical to Model City waste handling operations (e.g., aqueous waste treatment system, stabilization) to be closer to the new landfill location;
- The current land use of another area would need to be modified or rezoned, requiring the need to evaluate the potential environmental impacts associated with this land disposal facility, which, given the less developed/disturbed character of this land, would likely be greater than the Proposed Action; and
- Due to the smaller landfill size potentially necessitated by land or zoning restrictions, this alternative would not adequately address the projected deficit in regional hazardous waste disposal.

Use of other property at the Model City Facility for this project (i.e., property in the Town of Porter not currently zoned M-3 and all property in the Town of Lewiston) would require Siting Board approval to override current zoning restrictions. In addition, these areas are currently undeveloped and would have additional potential impacts, such as loss of vegetation and disturbance of wetlands. For the above reasons, action at a different location within the Model City Facility is not considered a reasonable alternative.

5.3 Action at a Different Site

Another alternative to the Proposed Action would be construction and operation of a hazardous and industrial non-hazardous waste landfill at a location other than the existing Model City Facility. The Model City Facility is the location of 11 hazardous and industrial non-hazardous waste landfills (10 closed landfills and the currently active RMU-1). The Model City Facility has invested millions of dollars in the infrastructure that is necessary to support and maintain a state-of-the-art hazardous waste treatment, storage and disposal facility. That infrastructure includes a

fully integrated wastewater treatment plant that is used to treat, among other things, the leachate from the active and closed landfills and a stabilization facility necessary to treat hazardous waste to Federal Land Disposal Restriction standards prior to land disposal. The existing facility also includes extensive groundwater, surface-water and air monitoring systems, with a well-developed database, an exhaustive hydrogeologic study of the site, a comprehensive on-site analytical laboratory and well established utilities and security systems. In addition, the Model City Facility has in place a well-qualified management team and well trained employees familiar with the operation of the facility.

Any alternative site would require duplication of the infrastructure systems, support and monitoring systems and the management and operating personnel described above. At the same time, closure and post-closure care at the current Model City Facility would be required. Any such alternative would thus be significantly more expensive, to the point of being cost prohibitive. Locating the proposed unit at a new location elsewhere in NYS or within Niagara County, but outside the boundaries of the existing CWM facility, would require development of a new site, increasing the type and magnitude of potential environmental impacts associated with a land disposal facility. The time required for permitting the facility would also be lengthier, causing an increased deficit in regional hazardous waste land disposal capacity.

Additionally, 6 NYCRR Part 617.14(f)(5) provides that the discussion of site alternatives "may be limited to parcels owned by, or under option to, a private applicant." CWM does not own or have under option any other property in NYS of adequate size and appropriately zoned for hazardous waste facility siting. Although WMI, CWM's parent company, does own other property in NYS, none of these properties are currently permitted or equipped for hazardous waste disposal, and historically, NYSDEC has been opposed to permitting hazardous waste disposal units at an existing solid waste disposal site. Also, CWM is not aware of any other company currently pursuing the development of commercial treatment, storage and disposal facilities within NYS. Since this alternative is largely theoretical, potential wetland impacts are unknown. However, given the size of the development footprint required for a new facility, it is unlikely that wetland impacts could be limited to the 2.567 acres anticipated on the currently proposed Project Site. For all of the above reasons, CWM does not believe that the "action at a different site alternative" is a reasonable alternative.

5.4 Different Technological Approach

As specified in the NYSDEC's waste management hierarchy, alternatives to land disposal for the management of hazardous waste include (in order of preference):

- Reduction at the source (waste minimization).
- Recovery, recycling or reuse of wastes that continue to be generated.

- Detoxification, treatment or destruction of wastes that cannot be recycled or reused.

Use of the above alternate technologies will serve to reduce the volumes of hazardous waste or reduce the concentration or mobility of hazardous constituents in the waste. However, it should be noted that each of the technologies produce waste streams and residues that still require additional management, including land disposal. After using the alternative technologies to the extent practical, land disposal of remaining wastes and residuals will always be necessary under current technological limitations. This being the case, application of these technological alternatives will not reduce the need for the RMU-2 or its potential wetland impacts.

5.5 Design Subalternatives

There are three basic categories of design subalternatives:

- Changes in materials;
- Changes in construction techniques; and
- Changes in operational techniques.

Although a number of design subalternatives within each of these categories have been evaluated, none of them would substantially change the footprint of the proposed facility or its potential wetland impacts.

6.0 AVOIDANCE, MINIMIZATION, AND MITIGATION

As previously mentioned, the proposed Project requires excavation of large contiguous areas of land, which limits opportunities for minimizing/avoiding wetland impacts. A Stormwater Pollution Prevention Plan (SWPPP)will be prepared for the Project and implementation of this plan will prevent indirect impacts to wetlands during Project construction. The Stormwater Pollution Prevention Plan for RMU-2 will be similar to the nature and scope of the current Stormwater Pollution Prevention Plan for RMU-1 at the facility.

To mitigate for the unavoidable permanent loss of wetlands within the Project Site, the Applicant proposes the construction of a 4.37-acre wetland on a 21-acre parcel of land owned by CWM immediately west of the Project Site. This parcel is within the boundary of the Model City Facility. It is a former soil storage area that is currently dominated by successional deciduous forest, but also includes areas of disturbed land, successional old field, and approximately 5 acres of forested and emergent wetland communities. A Conceptual Mitigation and Monitoring Plan has been prepared and is included in Appendix C.

7.0 COMPLIANCE WITH THE FEDERAL AND STATE ENDANGERED SPECIES ACTS

edr companies requested information concerning documented occurrences of endangered and threated wildlife and plant species, from the New York Natural Heritage Program (NHP) in a letter dated June 28, 2012. A response letter from the NHP, dated July 3, 2012, indicated that there are no records of state-listed animals or plants, significant natural communities or other significant habitats on-site. Copies of these letters are provided in Appendix B.

Additionally, in July 2012 edr reviewed the U.S. Fish and Wildlife Services (USFWS) online database for any Federally-listed endangered and threatened species within Niagara County. Two species, the bald eagle (*Haliaeetus leucocephalus*) and the Eastern prairie-fringed orchid (*Platanthera leucophaea*) have been documented within Niagara County. A copy of the search results is provided in Appendix B. However, it is unlikely that Bald Eagles use the Project Site for foraging, roosting or nesting, due to the disturbed nature of the site. In addition, the presence of Bald Eagle (a state-listed threatened species) in the vicinity of the Project Site was not noted on the NHP letter. The occurrence of Eastern prairie-fringed orchid within Niagara County is noted by the USFWS as a historic record, without recent sightings. Furthermore, the Site lacks suitable habitat for this species and the NHP does not have record of this federally-listed threatened species in the vicinity of the Project Site. Therefore, the Project is not anticipated to have any impact on threatened or endangered wildlife or plant species.

8.0 COMPLIANCE WITH THE HISTORIC PRESERVATION ACT

In a letter dated June 22, 2012 to the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) State Historic Preservation Office (SHPO), ARCADIS requested a project review for potential effects upon properties listed on the National Register of Historic Places, as well as other cultural resources in accordance with Section 106 of the National Historic Preservation Act of 1966. The SHPO responded to this request in a letter dated June 29, 2012, indicating that the proposed Project will have No Effect upon cultural resources in or eligible for inclusion in the National Registers of Historic Places. Copies of the above referenced correspondence are provided in Appendix B.

9.0 COMPLIANCE WITH SEQRA

Pursuant to the requirements of New York State Environmental Quality Review Act (SEQRA), Section 617.7 Determining Significance, the NYSDEC, as Lead Agency, has requested a Draft Environmental Impact Statement (DEIS) be completed for this Project. ARCADIS, on behalf of the Applicant, completed a DEIS for the Project in April of 2003, which has subsequently been revised in August of 2009, March of 2012,and February 2013. A final revised DEIS is anticipated to be submitted in July 2013.

10.0 REFERENCES

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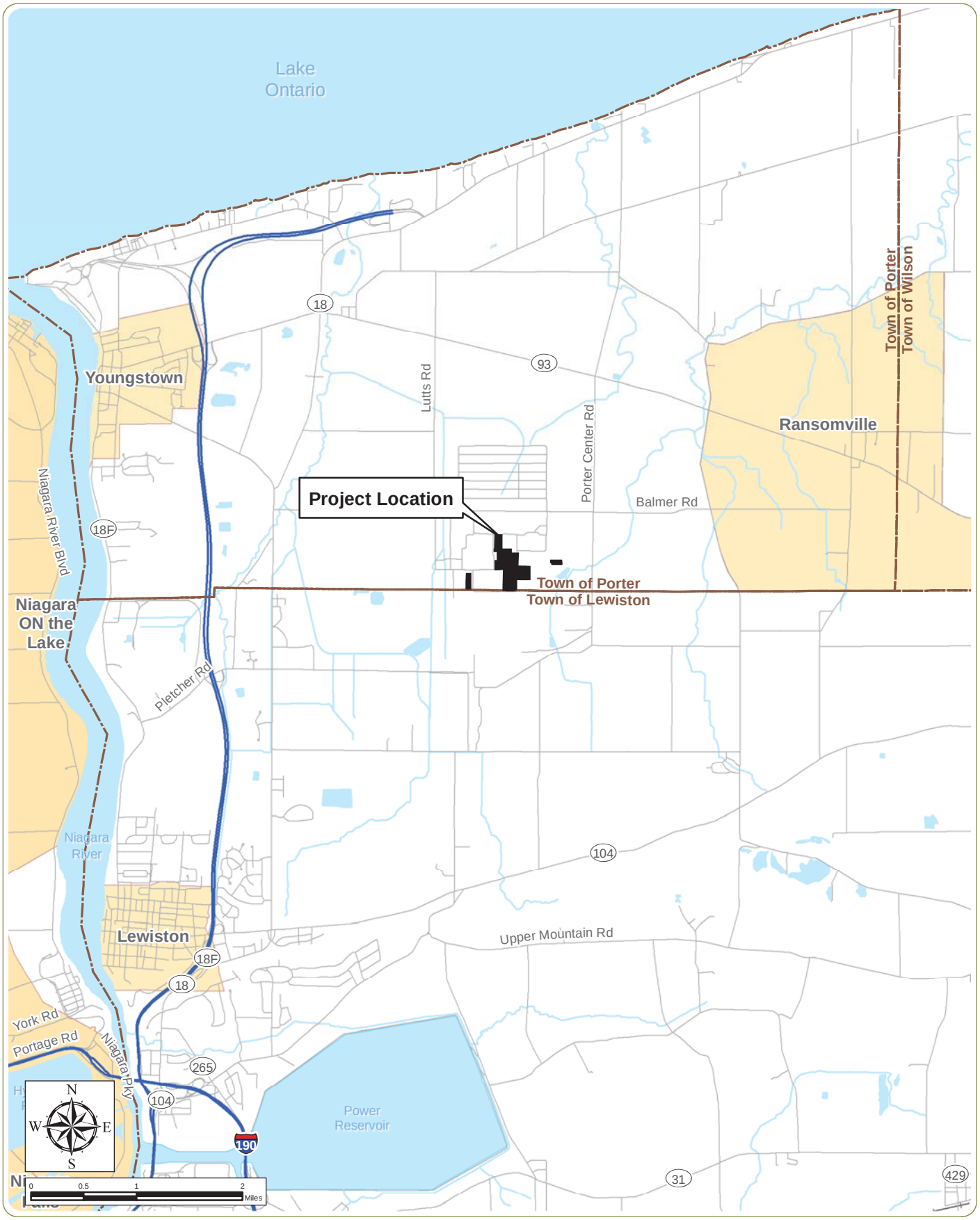
APPENDIX A

Figures



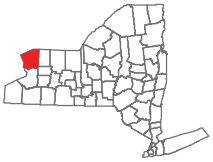
Residuals Management Unit 2

Town of Porter, Niagara County
Joint Application for Permit

Figure 1: Regional Project Location

June 2013

Notes: Base Map: ESRI StreetMap North America, 2008.



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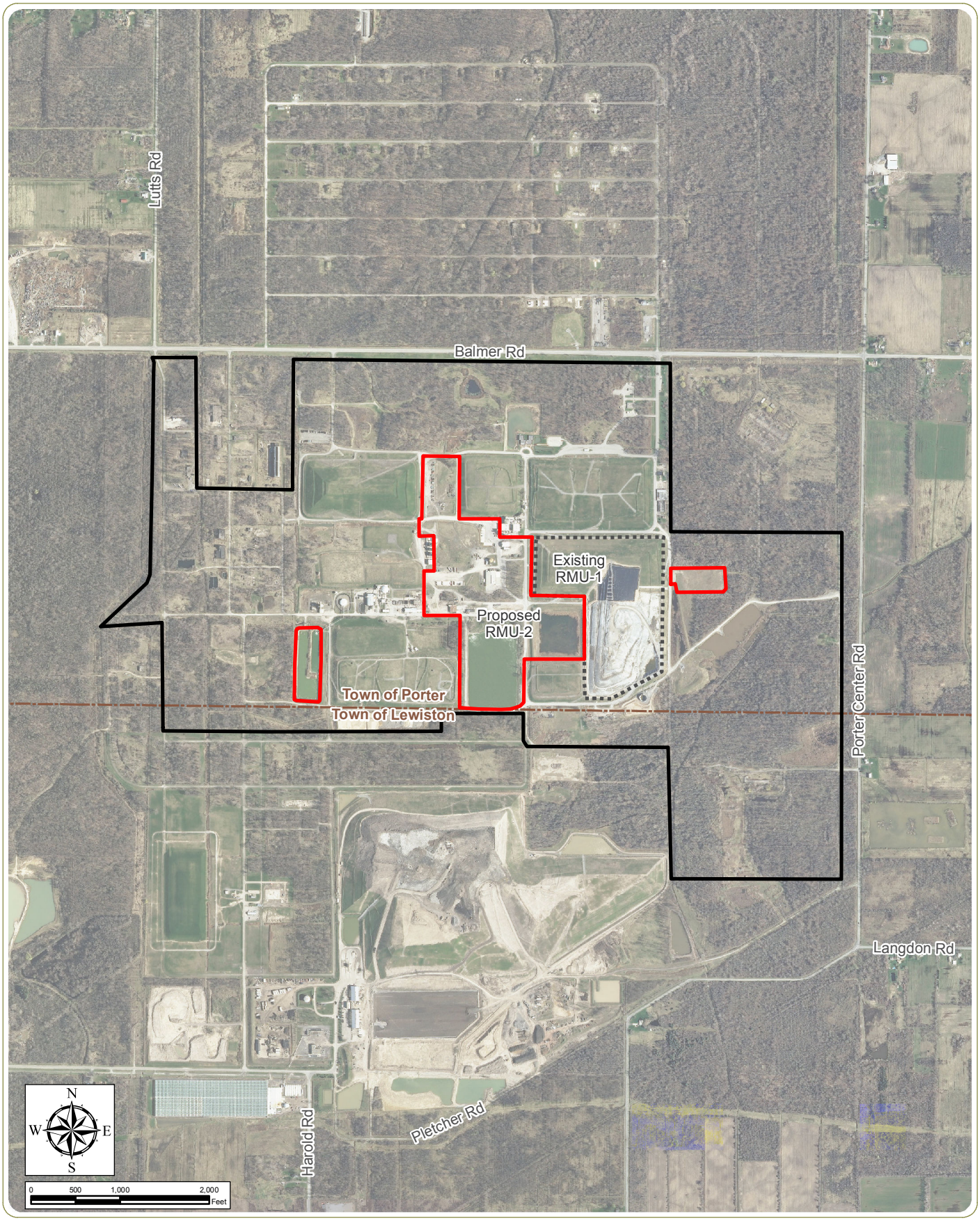

Residuals Management Unit 2

Town of Porter, Niagara County
Joint Application for Permit

Figure 2: Project Site

July 2013

Notes: Base Map: 1 ft resolution natural color orthophotography, year 2011.

Project Site
RMU-1 (Existing)
Model City Facility
Town Boundary

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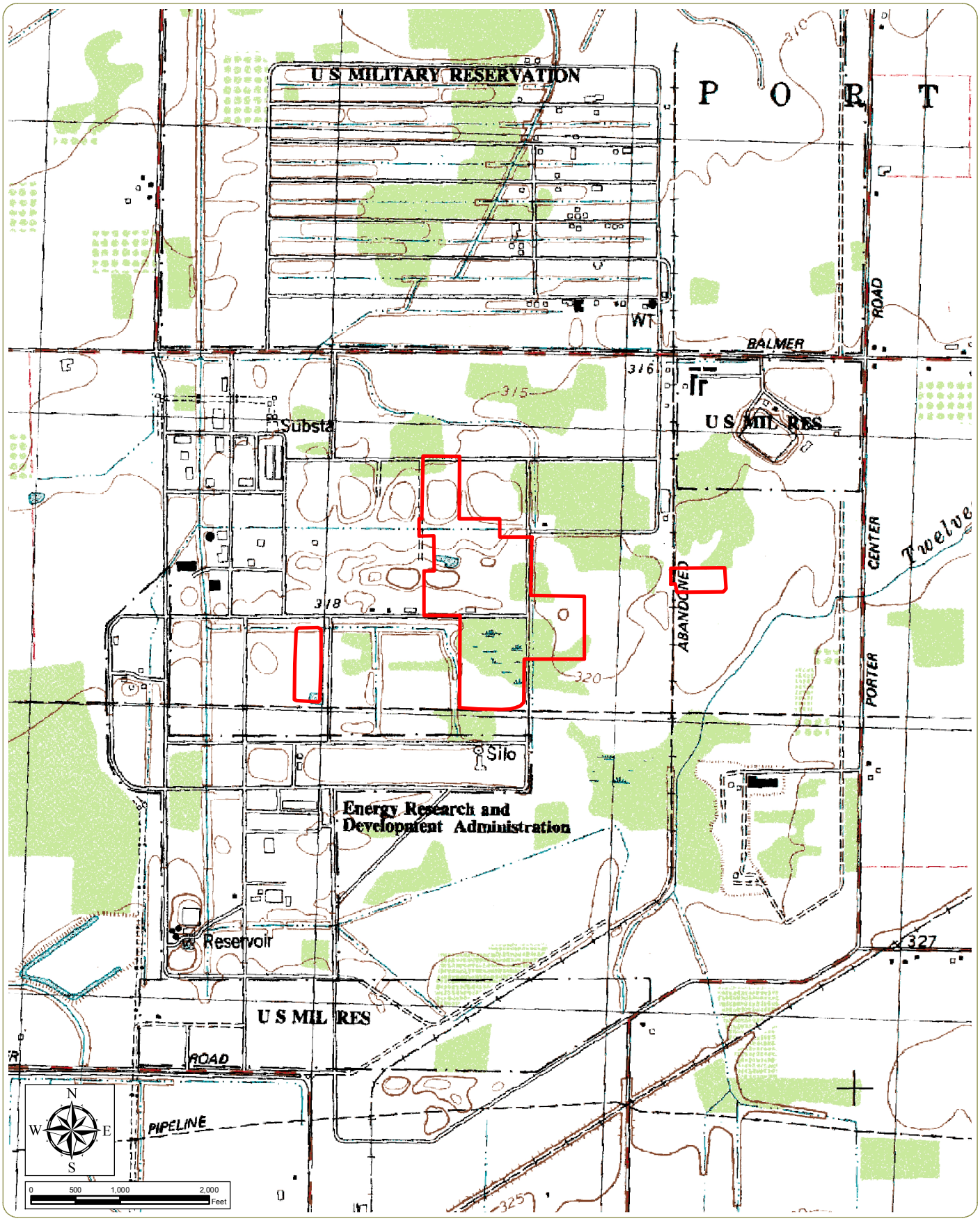

Residuals Management Unit 2

Town of Porter, Niagara County
Joint Application for Permit

Figure 3: USGS Topographic Mapping

June 2013

Notes: Base Map: USGS 7.5-minute Ransomville topographic quadrangle.

Project Site

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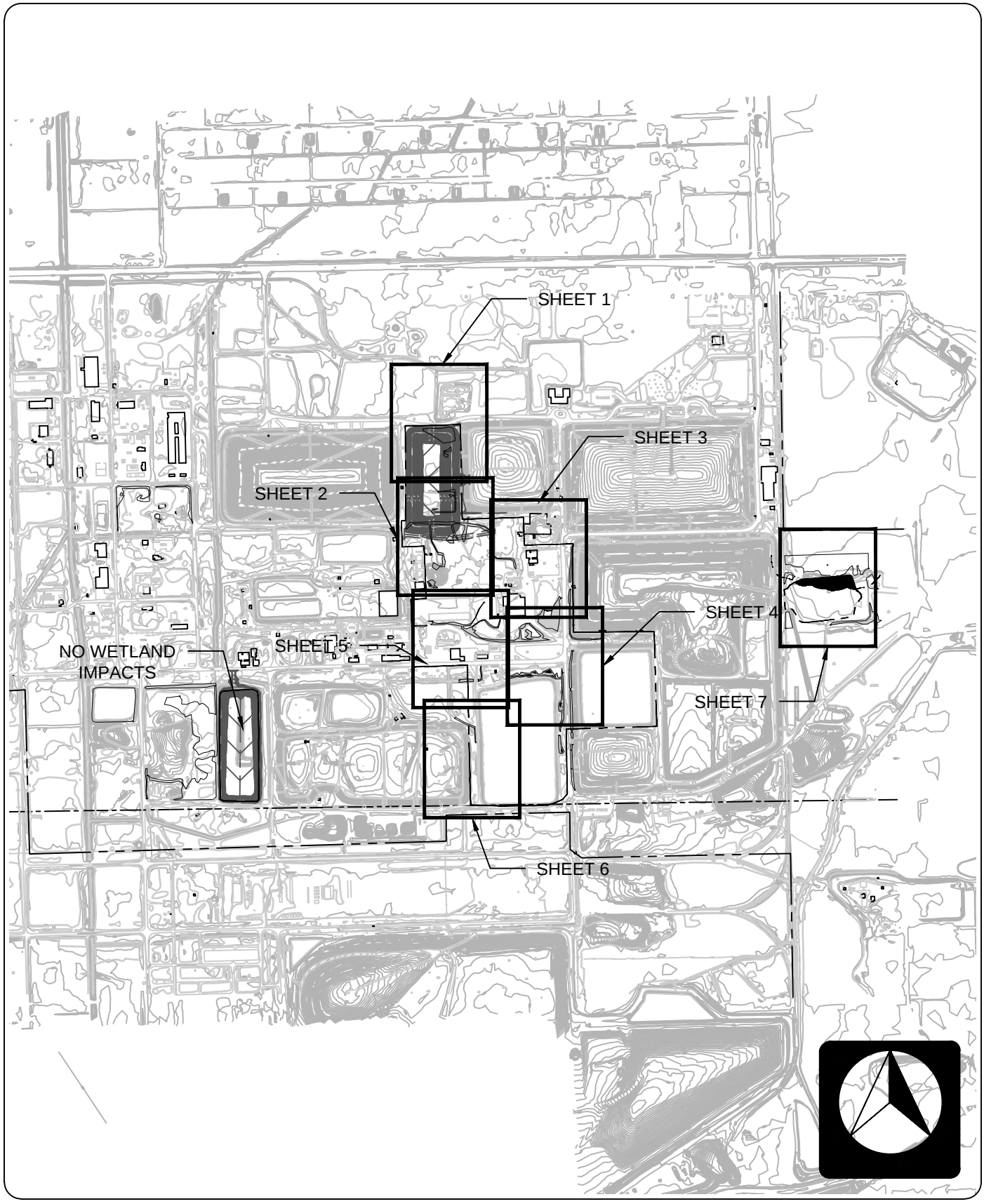

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DRAWN BY: **EML** / CHECKED BY: **JP**	SCALE: **1"=1000'** / DATE: **June 2013**

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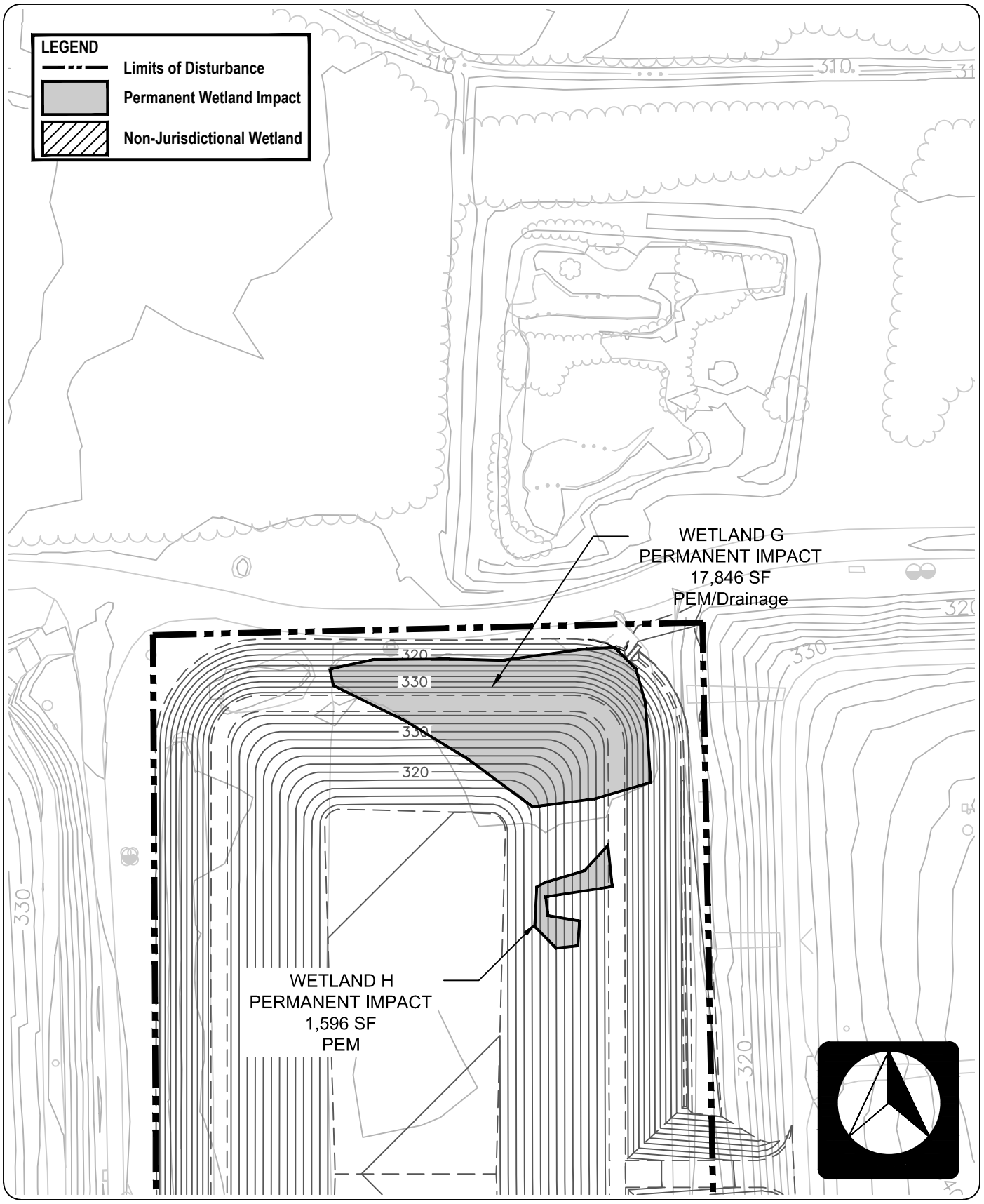
www.edrcompanies.com
phone: 315.471.0688



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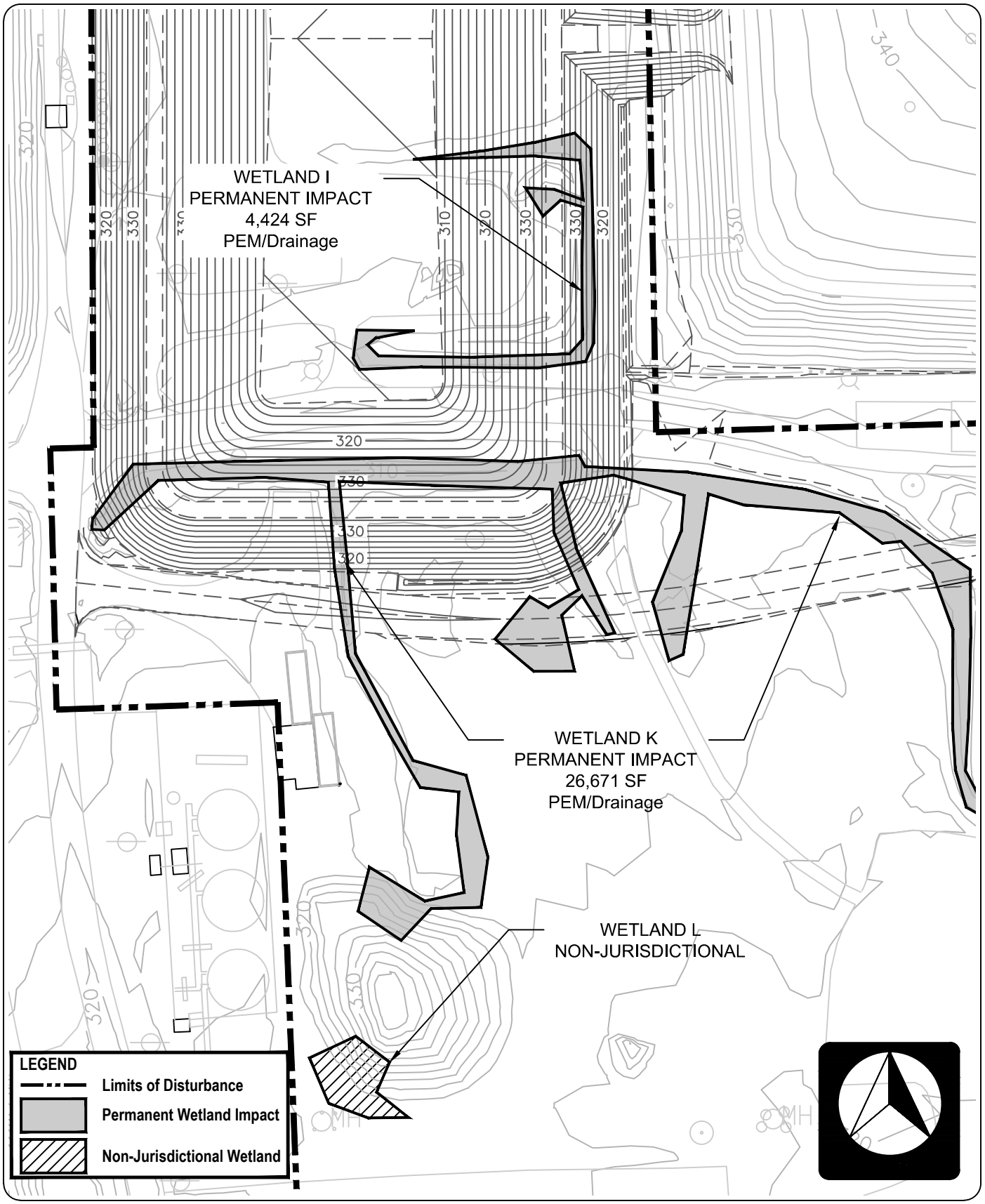

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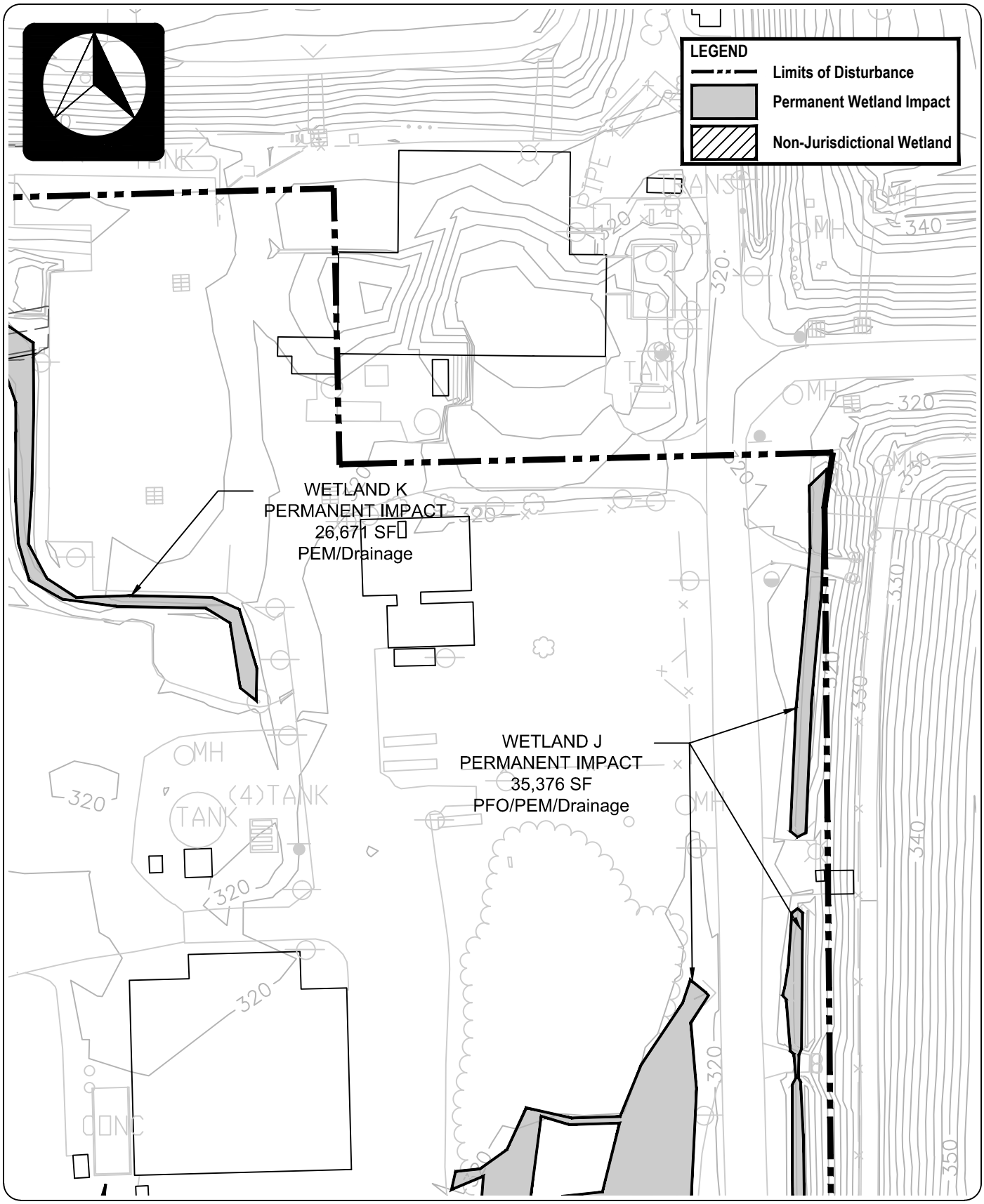

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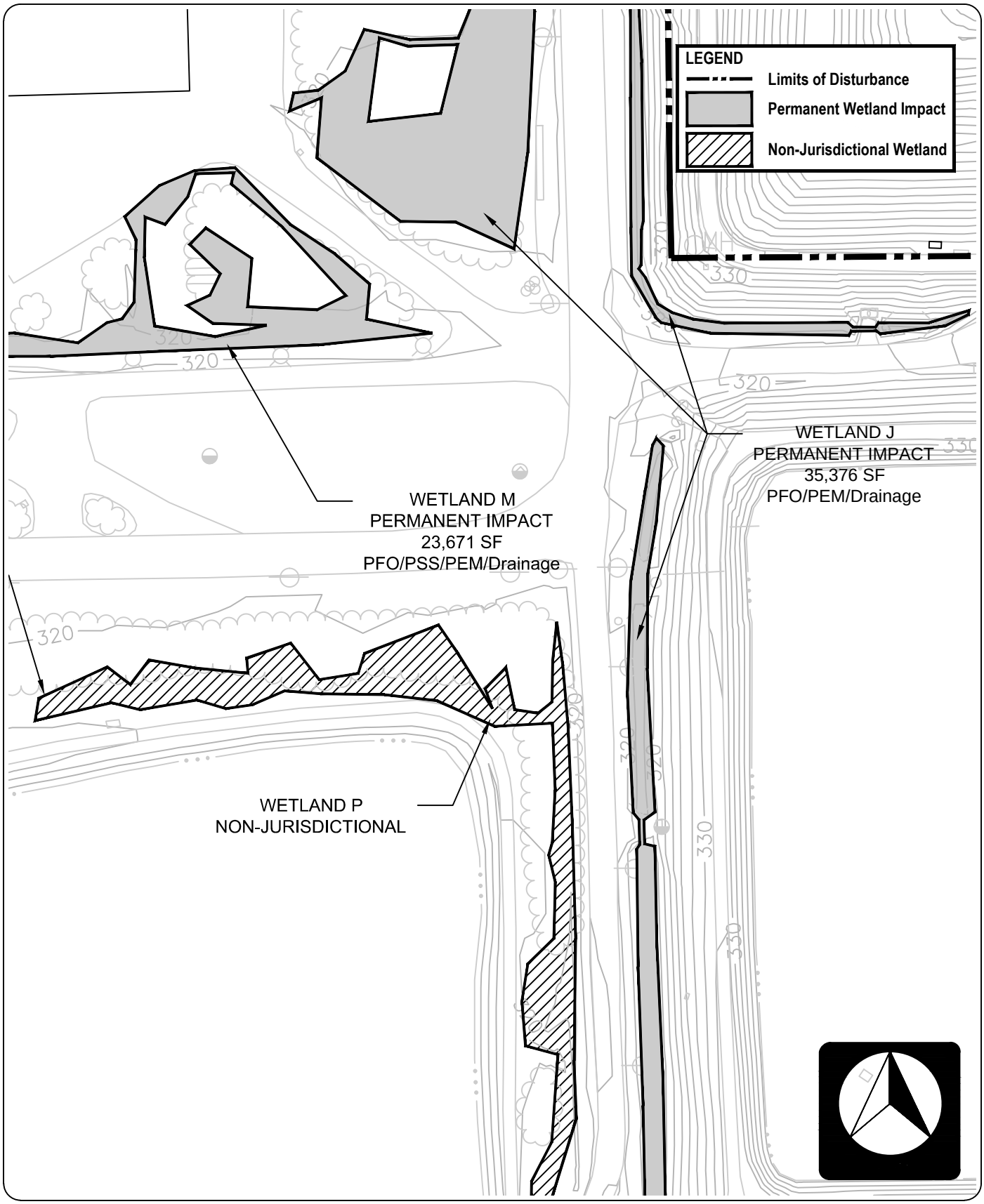

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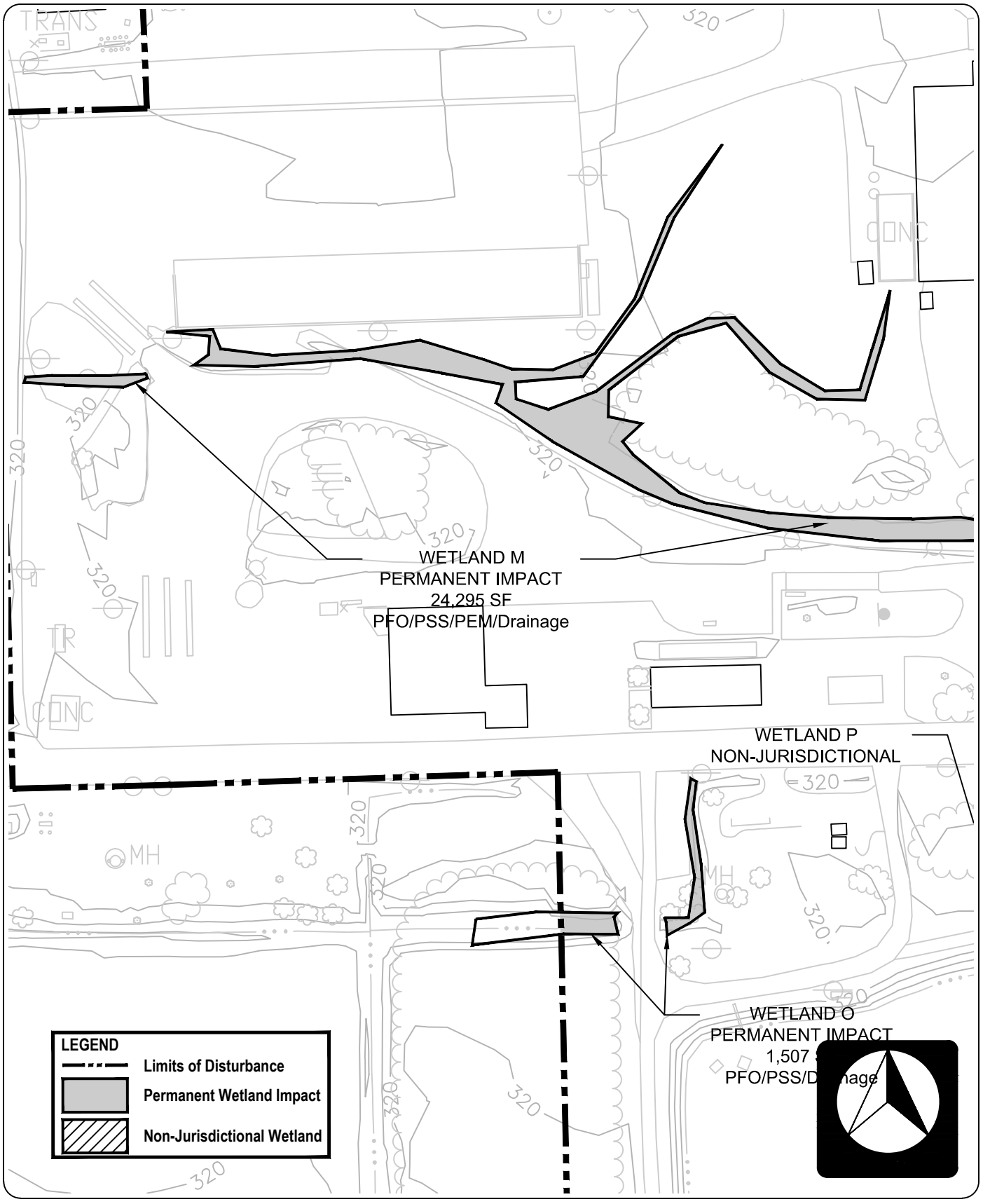

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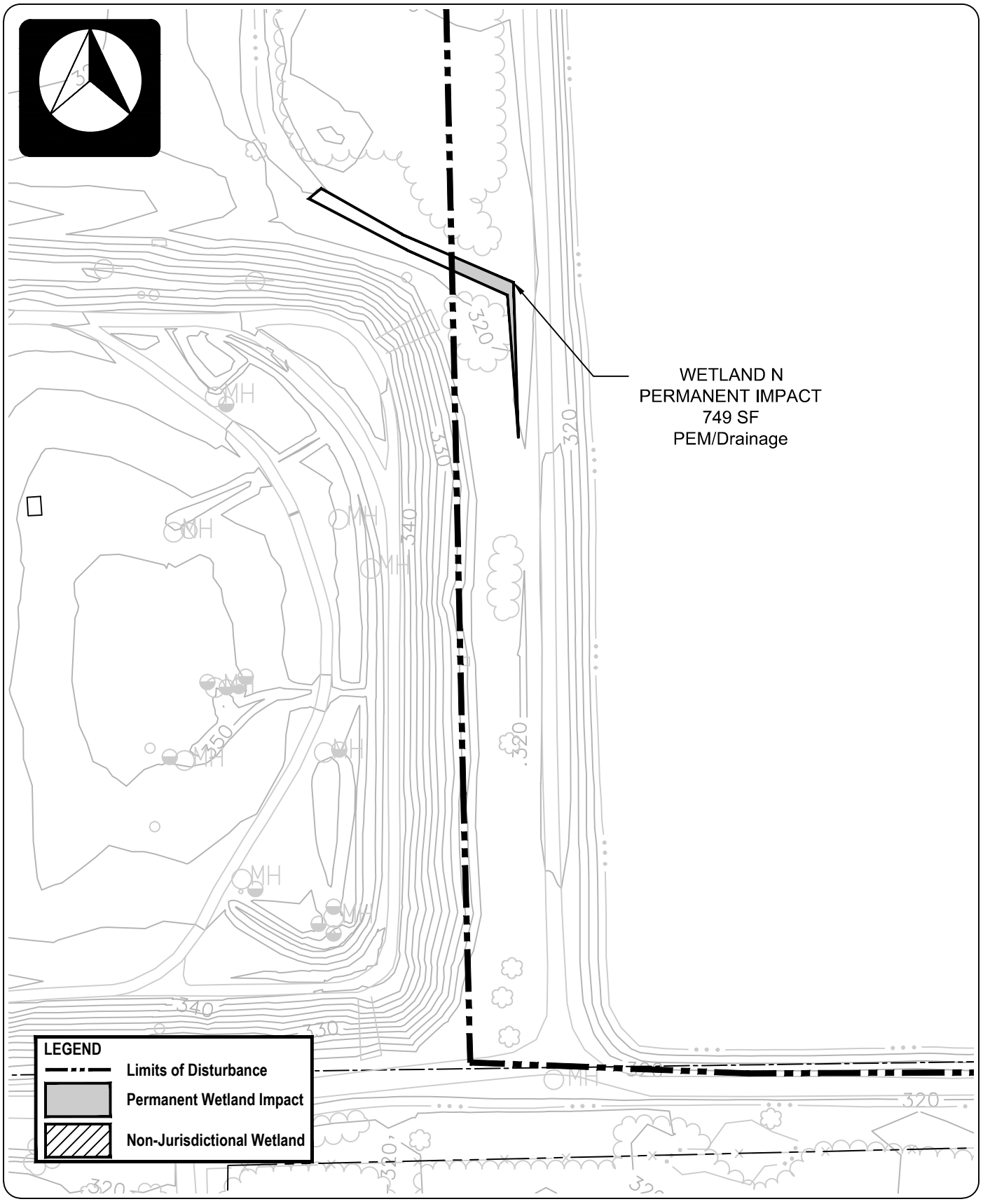
phone: 315.471.0688



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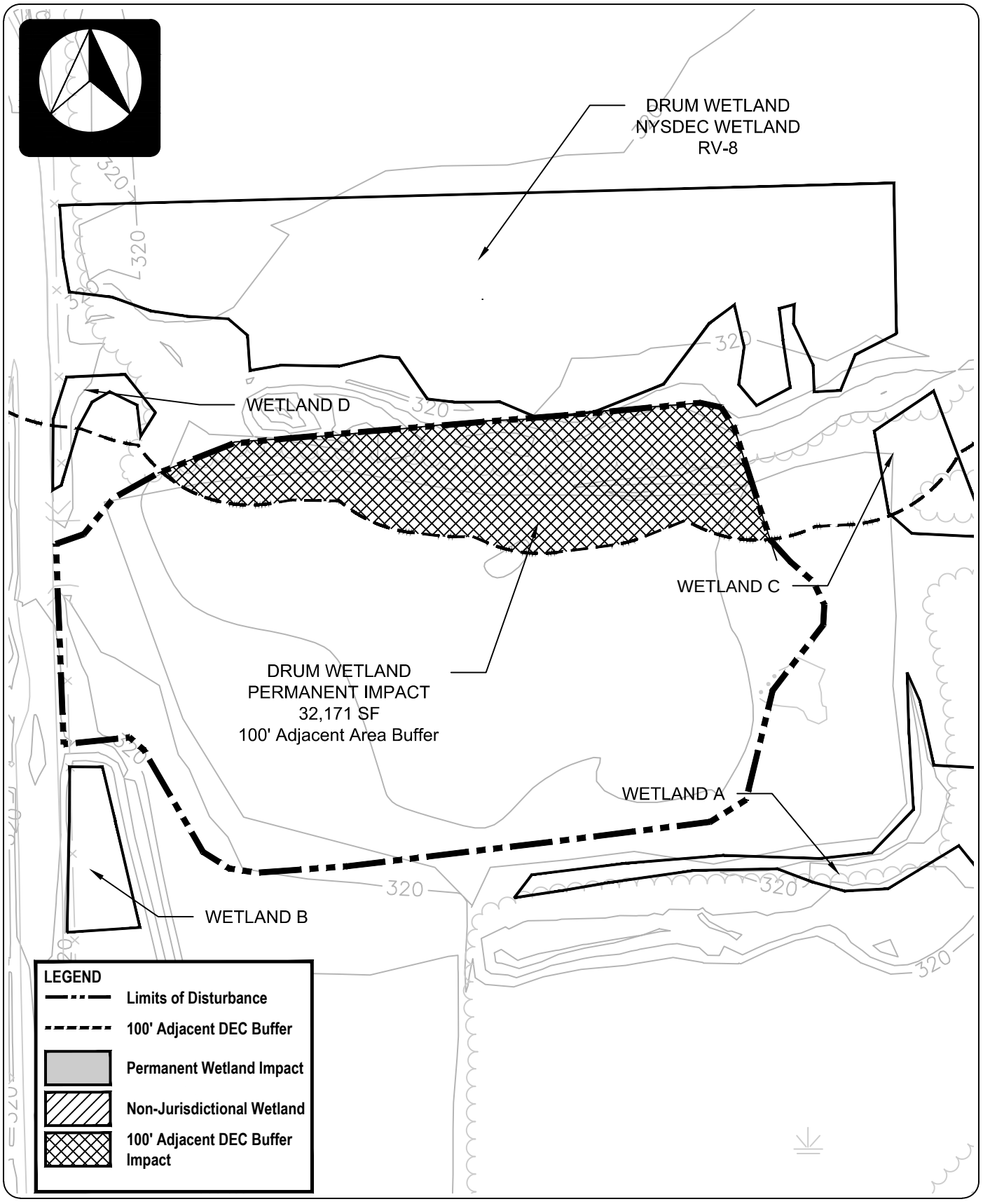

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www.edrcompanies.com
phone: 315.471.0688

APPENDIX B

Agency Correspondence

WASTE MANAGEMENT

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

November 18, 2003

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

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

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

Gentlemen:

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

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

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

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

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

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

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

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

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

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

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

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

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

Sincerely,
CWM CHEMICAL SERVICES, LLC

Jill A. Knickerbocker

Jill A. Knickerbocker
Technical Manager
Model City Facility

JBH/JAK/jbh
Attachment

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

WASTE MANAGEMENT

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

July 6, 2009

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

Re: Request for Jurisdictional Determination

Dear Mr. Keppner:

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

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

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

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

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

Sincerely,
CWM CHEMICAL SERVICES, LLC

Jill A. Banaszak
Technical Manager
Model City Facility

JBH/JAB/jbh
Attachment

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

WASTE MANAGEMENT

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."

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	

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

WASTE MANAGEMENT

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.

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

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	

WASTE MANAGEMENT

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
B. Rostami	- NYSDEC/Region 9
M. Cruden	- NYSDEC/Albany, NY
T. Killeen	- NYSDEC/Albany, 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	

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,

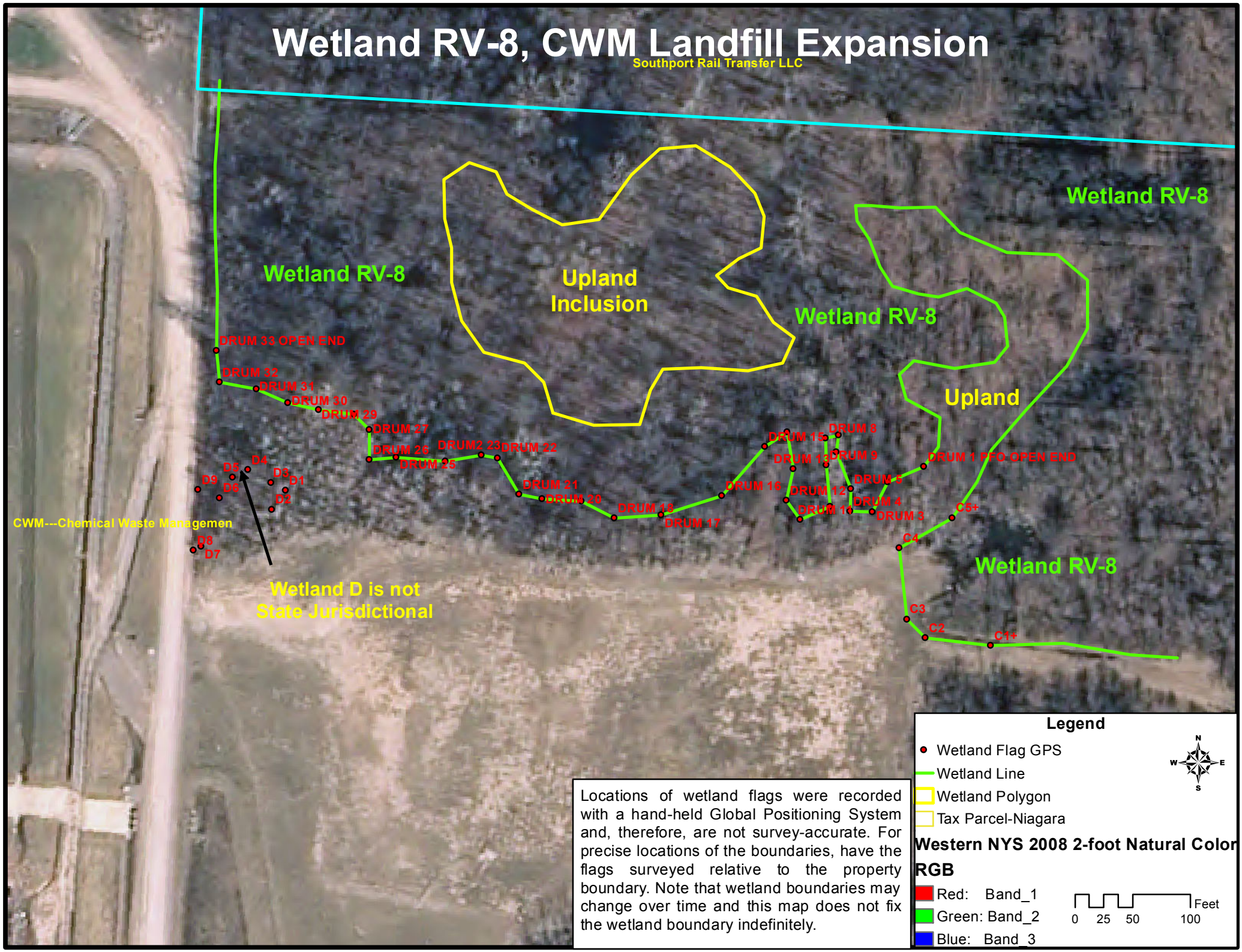
Charles P. Rosenburg

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
Wetland RV-8
Upland Inclusion
Wetland RV-8
Wetland RV-8
Upland
Wetland RV-8
DRUM 33 OPEN END
DRUM 32
DRUM 31
DRUM 30
DRUM 29
DRUM 27
DRUM 26
DRUM2 23
DRUM 22
DRUM 25
DRUM 21
DRUM 20
DRUM 18
DRUM 17
DRUM 16
DRUM 15
DRUM 13
DRUM 12
DRUM 14
DRUM 8
DRUM 9
DRUM 5
DRUM 4
DRUM 3
DRUM 1 FFO OPEN END
C5+
C4
C3
C2
C1+
D5
D4
D3
D9
D6
D1
D2
D8
D7
CWM---Chemical Waste Managemen
Wetland D is not State Jurisdictional
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
N
W
E
S
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

edr
COMPANIES

June 28, 2012

Jean Pietrusiak
New York Natural Heritage Program
625 Broadway, 5th Floor
Albany, NY 12233-4757

RE: CMW RMU-2 Facility and Mitigation Area
edr Project No. 09022

Dear Ms. Pietrusiak:

edr Companies is compiling environmental information for a proposed expansion of the existing CWM Model City Hazardous Waste Management Facility and associated wetland mitigation area, located in the Town of Porter, Niagara County, New York. The Project area is located within the Ransomville USGS 1:24,000 quadrangle (see attached project location map). Please accept this request for any information you may have concerning documented endangered and threatened wildlife and/or plant species and/or important ecological communities that may occur in or adjacent to the site.

If you have any questions regarding this data request or require additional project information, please do not hesitate to contact me at 315-471-0688. Thank you in advance for your attention to this request. We look forward to receiving your response.

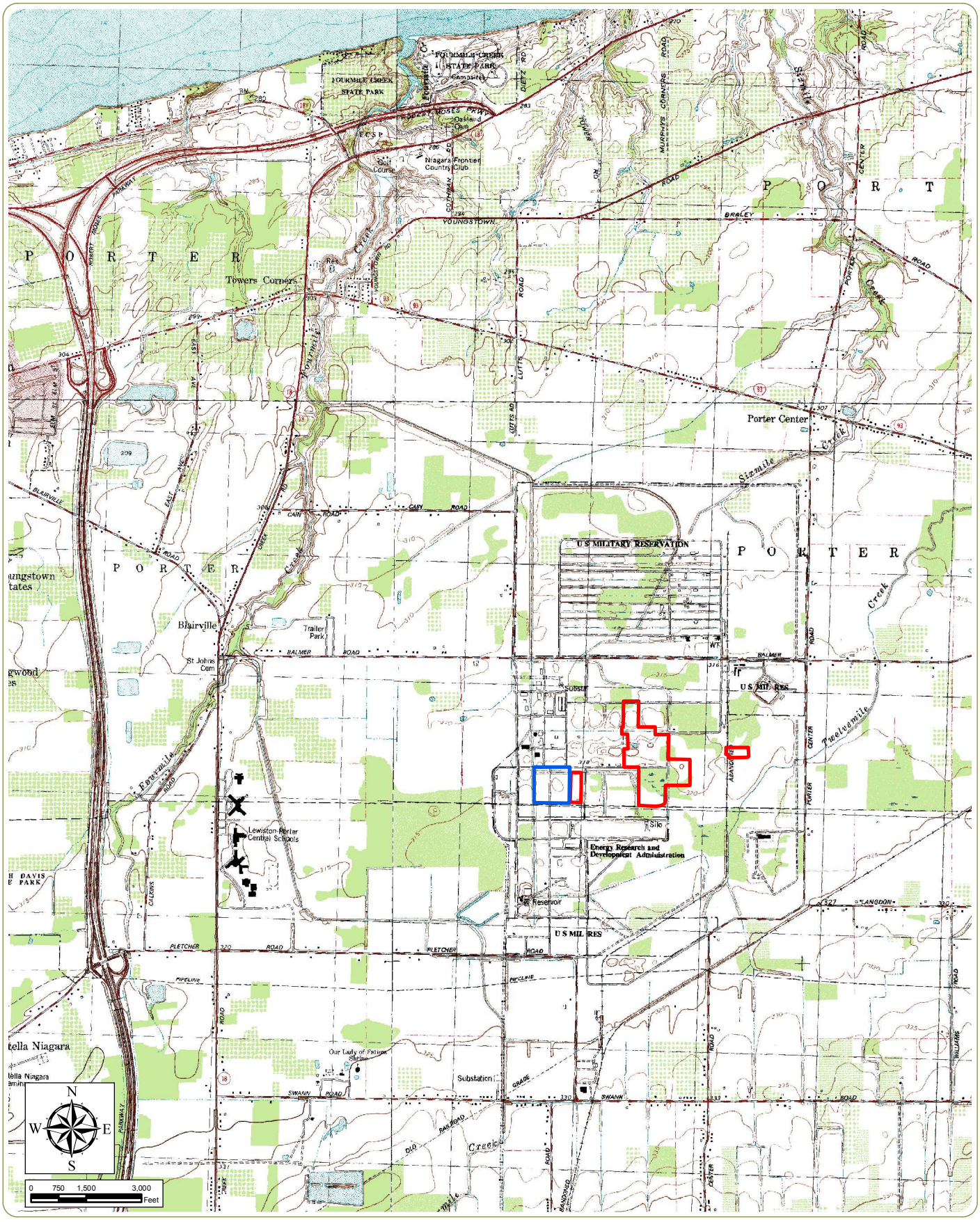
Sincerely,

Lisa Young

Lisa Young
Senior Environmental Analyst

217 Montgomery Street, Suite 1000, Syracuse, New York 13202
P. 315.471.0688 :: F. 315.471.1061 :: www.edrcompanies.com

N 43° 02' 56", W 76° 08' 56"



Residuals Management Unit 2

Town of Porter, Niagara County

Project Location

June 2012

Notes: Base Map: 1 ft resolution natural color orthophotography, year 2011.

Proposed Mitigation Site

Proposed RMU-2 Site

edr COMPANIES
www.edrcompanies.com

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov

Joe Martens
Commissioner

July 3, 2012

Lisa Young
E D R Companies
217 Montgomery St, Suite 1000
Syracuse, NY 13202

Dear Ms. Young:

In response to your recent request, we have reviewed the New York Natural Heritage Program database, with respect to an Environmental Assessment for the proposed Hazardous Waste Management Facility expansion of existing CWM Motel City Facility, Project # 090 22, area as indicated on the map you provided, located in the Town of Porter, Niagara County.

We have no records of rare or state listed animals or plants, significant natural communities or other significant habitats, on or in the immediate vicinity of your sites.

The absence of data does not necessarily mean that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities and other significant habitats maintained in the Natural Heritage Data bases. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Jean Pietrusiak, Information Services
NYS Department Environmental Conservation

Enc.
cc: Reg 9 , Wildlife Mgr.

642

Niagara County

Federally Listed Endangered and Threatened Species and Candidate Species

This list represents the best available information regarding known or likely County occurrences of Federally-listed and candidate species and is subject to change as new information becomes available.

Common Name	Scientific Name	Status
Bald eagle [1]	*Haliaeetus leucocephalus*	D
Eastern prairie fringed orchid *(Historic)*	*Platanthera leucophaea*	T

Status Codes: E=Endangered, T=Threatened, P=Proposed, C=Candidate, D=Delisted.

[1] The bald eagle was delisted on August 8, 2007. While there are no ESA requirements for bald eagles after this date, the eagles continue to receive protection under the Bald and Golden Eagle Protection Act (BGEPA). Please follow the Service's May 2007 Bald Eagle Management Guidelines to determine whether you can avoid impacts under the BGEPA for your projects. If you have any questions, please contact the endangered species branch in our office.

Information current as of: 7/19/2012

Print Species List

ARCADIS
295 Woodcliff Drive
Third Floor
Suite 301
Fairport
New York 14450
Tel 585 385 0090
Fax 585 385 4198
www.arcadis-us.com

Mr. Robert Englert
New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island Resource Center
PO Box 189
Waterford, New York 12188-0189

Subject:
CWM Chemical Services, LLC.
Proposed RMU-2 Expansion
Model City, New York

Date:
June 22, 2012

Contact:
Todd J. Farmen

Phone:
585.662.4028

Email:
todd.farmen@arcadis-us.com

Our ref:
B0023725.2011

Dear Mr. Englert:

Please find attached the completed *Project Review Cover Form* submittal necessary for the New York State Office of Parks, Recreation and Historic Preservation, Historic Preservation Field Services Bureau to initiate a review of potential historic and/or cultural impacts as the result of the proposed Residuals Management Unit 2 (RMU-2) expansion at the CWM Chemical Services, LLC. (CWM) facility located in Model City, Niagara County, New York.

Included with the completed form are maps and figures that show the geographic location of the existing Model City Facility and the proposed location of the RMU-2 expansion within the facility as Attachment 1. Attachment 2 provides photographs showing the proposed locations of the RMU-2 expansion and associated support facilities. Attachment 3 provides applicable sections of the RMU-2 *Draft Environmental Impact Statement* (DEIS) (prepared by ARCADIS, 2003 – revised 2009 and 2012) that was recently submitted to applicable agencies as part of the application process for the proposed action. The DEIS sections provided details on the physical setting of the proposed action within the Model City Facility and provides an overview of the planned activities associated with the proposed action.

To support the application process, ARCADIS, on behalf of CWM, requests the Historic Preservation Field Services Bureau perform an assessment of the proposed action and provide a determination on the potential historic and/or cultural resources impacts resulting from the proposed action.

If you have any questions regarding the information included with this application or require any additional information, please call me at 585.662.4028.

Sincerely,

ARCADIS

Todd Farmen
Project Manager

Copies:
Mr. Jonathan Rizzo, CWM Chemical Services, LLC.
Mr. William B. Popham, ARCADIS
Mr. Joseph Molina III, P.E., ARCADIS

New York State Office of Parks, Recreation and Historic Preservation
Historic Preservation Field Services Bureau
Peebles Island Resource Center, PO Box 189, Waterford, NY 12188-0189 (Mail)
Delaware Avenue, Cohoes 12047 (Delivery) **(518) 237-8643**

PROJECT REVIEW COVER FORM

Rev. 5-05

*Please complete this form and attach it to the top of **any and all information submitted to this office** for review.*
Accurate and complete forms will assist this office in the timely processing and response to your request.

This information relates to a previously submitted project.

PROJECT NUMBER ____PR_____

COUNTY _____

☐ If you have checked this box and noted the previous Project Review (PR) number assigned by this office you do not need to continue unless any of the required information below has changed.

2. This is a new project. ☒ If you have checked this box you will need to complete ALL of the following information.

Project Name Residuals Management Unit 2 CWM Chemical Services, LLC.

Location 1550 Balmer Road
You MUST include street number, street name and/or County, State or Interstate route number if applicable

City/Town/Village Model City, New York 14107
List the correct municipality in which your project is being undertaken. If in a hamlet you must also provide the name of the town.

County Niagara County
If your undertaking* covers multiple communities/counties please attach a list defining all municipalities/counties included.

TYPE OF REVIEW REQUIRED/REQUESTED (Please answer both questions)

A. Does this action involve a permit approval or funding, now or ultimately from any other governmental agency?

☐ **No** ☒ **Yes**

If Yes, list agency name(s) and permit(s)/approval(s)

Agency involved	Type of permit/approval	State	Federal
NYS Dept of Environmental Conservation	Haz Waste TS&D (Part 373) Air (Part 201) Siting (Part 361)	X	☐
U.S. Environmental Protection Agency	TSCA	☐	X
U.S. Army Corps of Engineering	Section 404 Permit	☐	X

B. Have you consulted the NYSHPO web site at **http://nysparks.state.ny.us to determine the preliminary presence or absence of previously identified cultural resources within or adjacent to the project area? If yes: ☐ **Yes** ☒ **No**

Was the project site wholly or partially included within an identified archeologically sensitive area? ☐ **Yes** ☐ **No**

Does the project site involve or is it substantially contiguous to a property listed or recommended for listing in the NY State or National Registers of Historic Places? ☐ **Yes** ☐ **No**

CONTACT PERSON FOR PROJECT

Name Todd Farmen **Title** Senior Project Manager

Firm/Agency ARCADIS

Address 295 Woodcliff Drive, Suite 301 **City** Fairport **STATE** NY **Zip** 14450

Phone (585) 662.4028 **Fax** (585) 385.4198 **E-Mail** todd.farmen@arcadis-us.com

http://nysparks.state.ny.us then select **HISTORIC PRESERVATION then select **On Line Resources**

The Historic Preservation Review Process in New York State

In order to insure that historic preservation is carefully considered in publicly-funded or permitted undertakings*, there are laws at each level of government that require projects to be reviewed for their potential impact/effect on historic properties. At the federal level, Section 106 of the National Historic Preservation Act of 1966 (NHPA) directs the review of federally funded, licensed or permitted projects. At the state level, Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law of 1980 performs a comparable function. Local environmental review for municipalities is carried out under the State Environmental Quality Review Act (SEQRA) of 1978.
regulations on line at:
http://nysparks.state.ny.us then select **HISTORIC PRESERVATION** then select **Environmental Review**

Project review is conducted in two stages. First, the Field Services Bureau assesses affected properties to determine whether or not they are listed or eligible for listing in the New York State or National Registers of Historic Places. If so, it is deemed "historic" and worthy of protection and the second stage of review is undertaken. The project is reviewed to evaluate its impact on the properties significant materials and character. Where adverse effects are identified, alternatives are explored to avoid, or reduce project impacts; where this is unsuccessful, mitigation measures are developed and formal agreement documents are prepared stipulating these measures.

ALL PROJECTS SUBMITTED FOR REVIEW SHOULD INCLUDE THE FOLLOWING MATERIAL(S).

☐ **Project Description**

Attach a full description of the nature and extent of the work to be undertaken as part of this project. Relevant portions of the project applications or environmental statements may be submitted.

☐ **Maps Locating Project**

Include a map locating the project in the community. The map must clearly show street and road names surrounding the project area as well as the location of all portions of the project. Appropriate maps include tax maps, Sanborn Insurance maps, and/or USGS quadrangle maps.

☐ **Photographs**

Photographs may be black and white prints, color prints, or color laser/photo copies; standard (black and white) photocopies are NOT acceptable.

-*If the project involves rehabilitation*, include photographs of the building(s) involved. Label each exterior view to a site map and label all interior views.

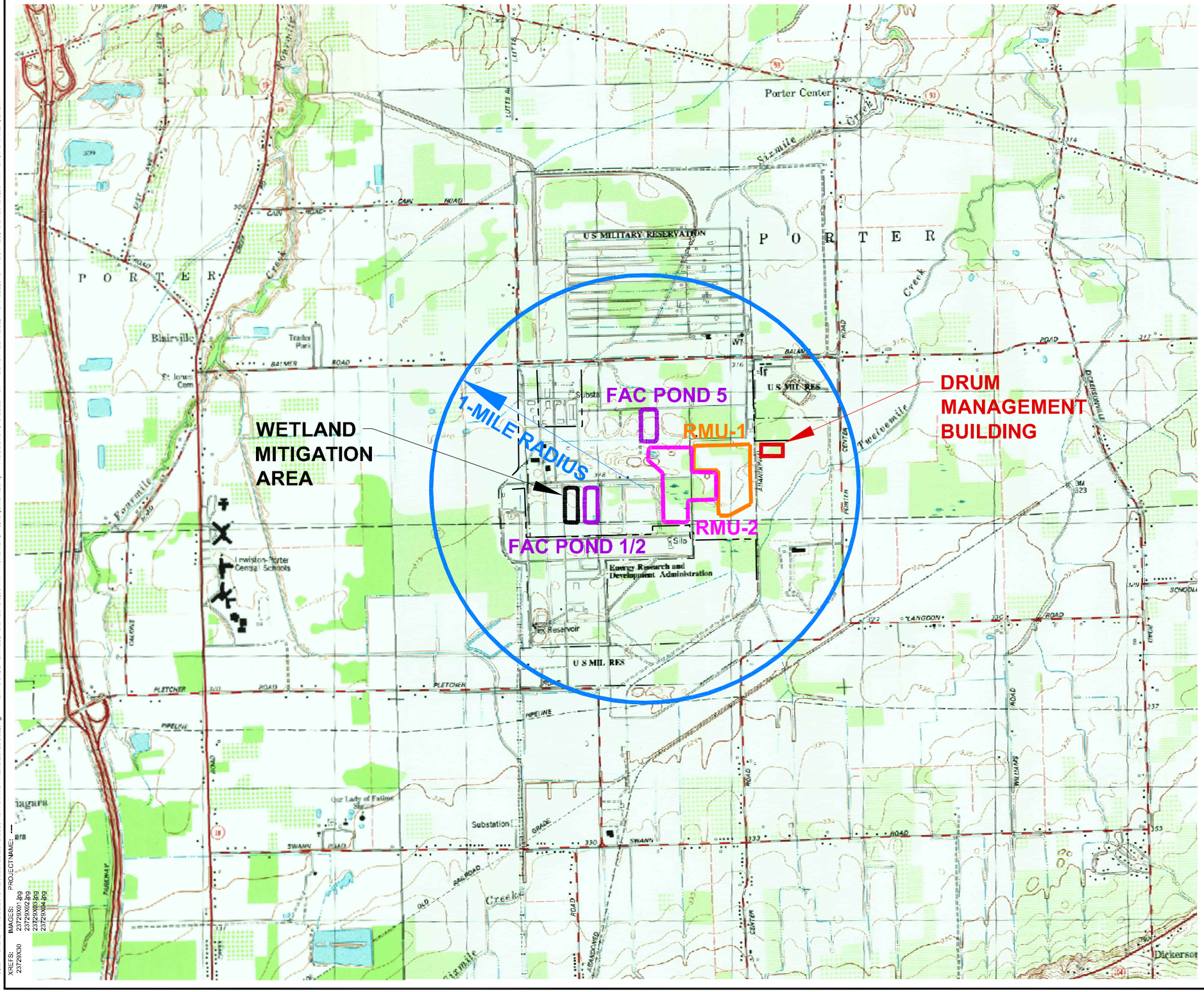
-*If the project involves new construction*, include photographs of the surrounding area looking out from the project site. Include photographs of any buildings (more than 50 years old) that are located on the project property or on adjoining property.

NOTE: Projects submissions will not be accepted via facsimile or e-mail.

*__Undertaking__ is defined as an agency's purchase, lease or sale of a property, assistance through grants, loans or guarantees, issuing of licenses, permits or approvals, and work performed pursuant to delegation or mandate.

ATTACHMENT 1

SITE LOCATION MAPS



LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- BUILDING
- 300 INDEX CONTOUR
- 305 INTERMEDIATE CONTOUR
- RAILROAD TRACK
- EDGE OF WATER
- PRIMARY ROADWAY
- SECONDARY ROADWAY
- GRAVEL ROAD

NOTES:

1. CONTOUR INTERVAL 5 FT.
2. PROPERTY LINE IS APPROXIMATE. EASEMENTS AND RIGHT-OF-WAYS NOT SHOWN.
3. RMU-2 LIMIT REPRESENTS TOE OF PERIMETER MSE WALL.
4. TOPOGRAPHIC MAPS OBTAINED FROM http://store.usgs.gov/b2c_usgs/usgs/maplocator/ ON JUNE 15, 2012. THE TOPOGRAPHIC MAP ARE: RANSOMVILLE QUADRANGLE NEW YORK – NIAGARA COUNTY 7.5 MINUTE SERIES DATED 1980, LEWISTON QUADRANGLE NEW YORK – ONTARIO 7.5 MINUTE SERIES DATED 1980, SIXMILE CREEK QUADRANGLE NEW YORK – NIAGARA COUNTY 7.5 MINUTE SERIES DATED 1974, AND FORT NIAGARA QUADRANGLE NEW YORK – ONTARIO 7.5 MINUTE SERIES DATED 1980.

0 1200' 2400'
GRAPHIC SCALE

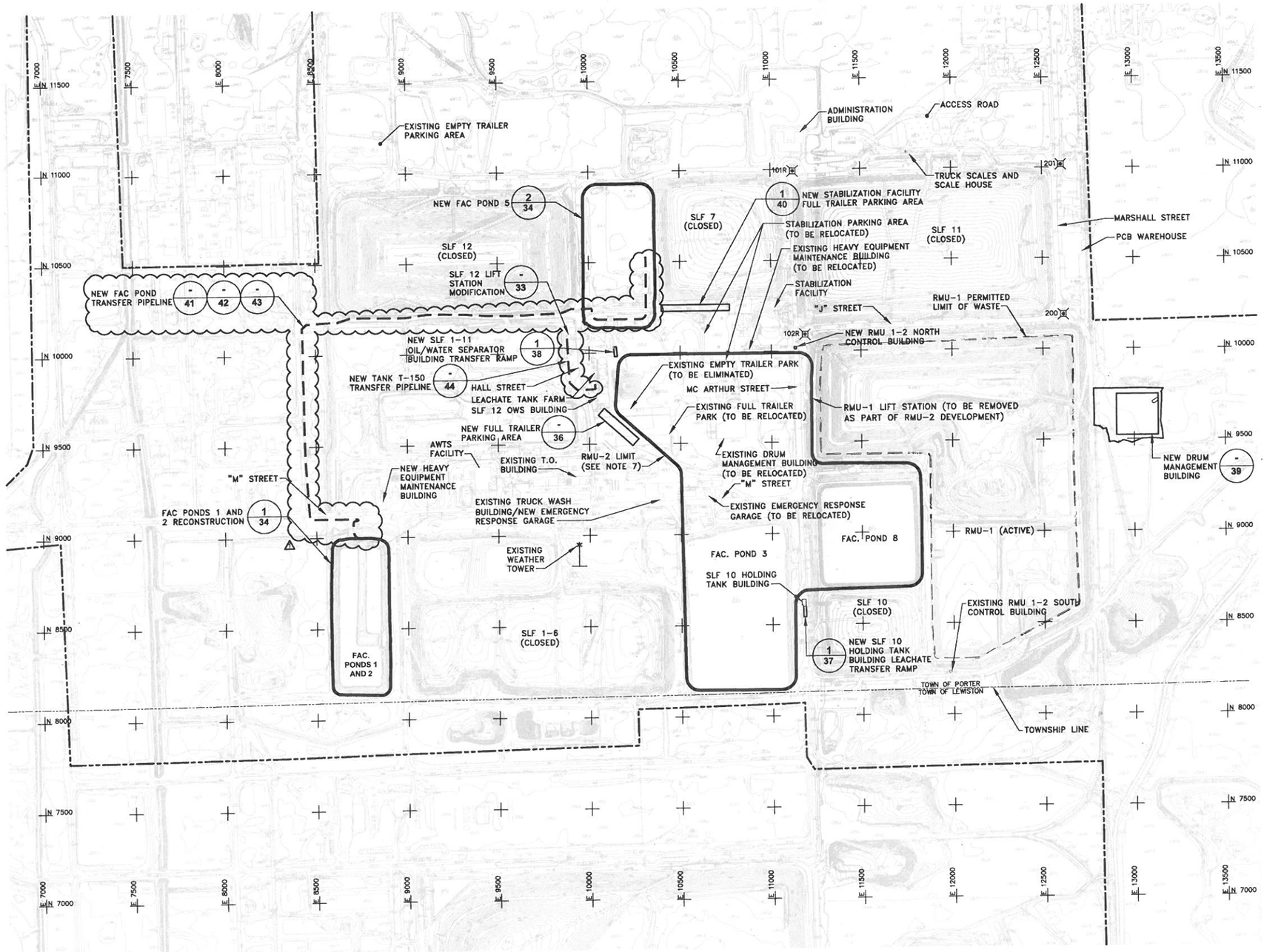
CWM CHEMICAL SERVICES, LLC
MODEL CITY, NEW YORK
RESIDUALS MANAGEMENT UNIT 2

CWM FACILITY AND RMU-2 PROJECT LOCATION

ARCADIS

FIGURE 1

CITY: SYRACUSE DN/GROUP: ENVCAD DB: K. DAVIS K. SARTORI L. FORAKER LD: PIC: W. POPHAM PM: T. FARMEN TM: B. STONE LYR: ON="*";OFF="*REF"
G:\ENVCAD\SYRACUSE\ACTIVE\23729\2012000101\DWG\RMUAREAS\23729G02.dwg LAYOUT: 2 SAVED: 6/21/2012 3:55 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: C4LD2B-PDF PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 6/21/2012 3:56 PM BY: FORAKER, LYDIA
XREFS: IMAGES: PROJECTNAME: —
23729X30 23729X01.jpg 23729X02.jpg 23729X03.jpg 23729X04.jpg



LEGEND:

BRUSHLINE	SIGN
CABLE MARKER	SWAMP
CATCH BASIN	TRAFFIC LIGHT
DROP INLET	TREE
FENCE	TREELINE
FIRE HYDRANT	UNIDENTIFIED OBJECT
GUARD RAIL	UTILITY POLE
LIGHT POLE	VALVE
MISCELLANEOUS POLE	WATER LINE
MONUMENT	EXISTING CONTOUR
POST	EXISTING GRADEBREAK
RAILROAD TRACKS	PROPERTY LINE
	NEW FAC POND TRANSFER PIPELINE -/41 -/42 -/43

200 CONTROL MONUMENT (SEE TABLE BELOW)

2/33 DETAIL REFERENCE NUMBER / DRAWING REFERENCE NUMBER

E 13500 N 7000 COORDINATE GRID (SEE NOTE 3)

RMU-1/RMU-2 CONTROL MONUMENTS

MONUMENTS	ELEVATION	CWM PLANT GRID		RMU-1 GRID		NY STATE PLANE COORDINATES (NAD-27)		NGVD-29 ELEVATION
		NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING	
102R	319.72	100+94.55	111+87.56	100+94.65	11+87.56	1,175,430.46	396,380.12	319.66
200	318.33	101+89.56	126+13.77	101+89.56	26+13.77	1,175,488.28	397,808.18	318.27
101R	316.01	109+94.28	111+23.09	---	---	1,176,331.436	396,339.034	315.92
201	316.62	110+17.82	126+3.49	---	---	---	---	---

CONTROL MONUMENTS NOTE:

1. RMU-1 EASTING GRID COORDINATES ARE SIMPLIFIED PLANT GRID COORDINATES. SUBTRACTING 10,000 FROM THE CWM PLANT GRID EASTING COORDINATE WILL CONVERT THE CWM PLANT GRID TO THE RMU-1 GRID. NOTE THAT NO CONVERSION IS REQUIRED FOR NORTHING COORDINATES.

NOTES:

1. TOPOGRAPHIC BASE MAP CONSISTS OF COMBINATION OF DATA COMPILED BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY DATED 5/31/01 BY AIR SURVEY CORP. (PROJECT NO.71010503). AND AN AUGUST 2008 SURVEY BY ENSOL, INC.
2. VERTICAL DATUM BASED ON NGS MEAN SEA LEVEL.
3. GRID COORDINATES SHOWN ARE CWM PLANT GRID.
4. CONTOUR INTERVAL 2 FT.
5. DASHED CONTOURS INDICATE THAT GROUND IS PARTIALLY OBSCURED BY VEGETATION OR SHADOWS. THESE AREAS MAY NOT MEET STANDARD ACCURACY AND REQUIRE FIELD VERIFICATION.
6. PROPERTY LINE IS APPROXIMATE. EASEMENTS AND RIGHT-OF-WAYS NOT SHOWN.
7. RMU-2 LIMIT REPRESENTS TOE OF PERIMETER MSE WALL.

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: K. DAVIS K. WOOD N.SMITHGALL LD: PIC: W. POPHAM PM: W. RANKIN TM: B. STONE LYR: ON=*OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIB\0023725\2009\00006\DWG\CONTRACT\IMPACT23725G03.DWG LAYOUT: 2-6 SAVED: 2/21/2012 10:41 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTCONT.CTB PLOTTED: 2/21/2012 10:42 AM BY: GETTS, BRIAN

XREFS:
2372SX02
2372SX01
2372SX00

IMAGES:

300' 0 300' 600'
1"=300'

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING. USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd
1	2/2012	REDESIGNED FAC POND TRANSFER PIPELINE	NWF	BMS

Professional Engineer's Name: JOSEPH MOLINA
Professional Engineer's No.: 072644

State	Date Signed	Project Mgr.
NY		WAR
Designed by	Drawn by	Checked by
BMS/PTO	LAF	BMS

ARCADIS OF NEW YORK, INC.

CWM CHEMICAL SERVICES, LLC • MODEL CITY, NEW YORK
RESIDUALS MANAGEMENT UNIT 2 DRAFT ENVIRONMENTAL IMPACT STATEMENT

PROPOSED FACILITY LOCATIONS

GENERAL

ARCADIS Project No.
B0023725.2009.00006

Date
OCTOBER 2009

ARCADIS of New York, Inc.
6723 Towpath Road
P.O. Box 66
Syracuse, New York
TEL. 315.446.91220

2-6

ATTACHMENT 2

PHOTOGRAPHS OF PROPOSED LOCATIONS

Photo #1: Proposed Wetland Mitigation Area

Photo #2: Proposed Drum Management Building Location

Project Name: CWM Chemical Services, LLC - RMU-2

Project Location: Proposed RMU-2 Location

Date: June 2012

Project No: B0023725.2011

Photo #3: Proposed RMU-2 Location - Central Area.

Photo #4: Proposed RMU -2 Location - West Area

Project Name: CWM Chemical Services, LLC - RMU-2
Project Location: Proposed RMU-2 Location
Date: June 2012
Project No: B0023725.2011

Photo #5: Proposed FAC Pond 5 Location.

Photo #6: Proposed RMU-2 Location - West Area

Project Name: CWM Chemical Services, LLC - RMU-2
Project Location: Proposed RMU-2 Location
Date: June 2012
Project No: B0023725.2011

Photo #7: Proposed RMU-2 Location - Southern Area

Photo #8: Existing Area of Proposed FAC Pond 1/2 Expansion

Project Name: CWM Chemical Services, LLC - RMU-2
Project Location: Proposed RMU-2 Location
Date: June 2012
Project No: B0023725.2011

ATTACHMENT 3

RMU-2 DEIS SECTIONS

1. Introduction

1.1 Brief Description of the Proposed Action

The proposed action is the construction and operation of additional secure landfill (SLF) disposal capacity to replace depleted existing hazardous and industrial non-hazardous waste disposal capacity at the CWM Chemical Services, LLC (CWM), Model City Hazardous Waste Management Facility (Model City Facility). The proposed facility will be designated Residuals Management Unit 2 (RMU-2) and will be located within the property boundaries of the Model City Facility. In recognition of the public policy that states that land disposal of industrial hazardous wastes, except treated residuals and untreated wastes posing little or no significant threat to the public health or to the environment, should be phased out as it is the least preferable method of waste management, the proposed landfill has been designated a residuals management unit. This designation reflects the fact that only wastes, waste treatment residuals and industrial non-hazardous wastes that meet United States Environmental Protection Agency (USEPA) and New York State Department of Environmental Conservation (NYSDEC) Land Disposal Restrictions (LDRs), would be accepted for disposal in RMU-2.

1.2 Environmental Impacts of the Proposed Action

Potential environmental impacts associated with the proposed action include the following:

1. Conversion of land that is presently comprised of existing storage, parking facilities and roads to an SLF.

2. Restrictions upon future land use in the area used for RMU-2.

3. Provision of additional capacity for land disposal of hazardous wastes and treatment residuals and industrial non-hazardous wastes in a manner that is protective of human health and the environment and in compliance with applicable federal and state land disposal regulations.

4. Creation of short-term employment during construction activities and continued long-term employment of facility employees during operation, closure and post-closure management of RMU-2.

5. The proposed action will provide new land disposal capacity within New York State (NYS). This will aid continued NYS site cleanups and Brownfield development projects.

6. Incremental increase in cumulative impacts in conjunction with other projects in Model City Facility's Ten Year Plan.

7. Loss of wildlife habitat.

8. Generation of local tax revenue.

9. Potential for release of hazardous constituents to air, surface water, groundwater and soil.

10. A temporary increase in night time local light pollution.

11. Potential odor issues.

12. Impacts to visual aesthetics in the vicinity of the Model City Facility.

13. Potential waste-on-waste reactions.

14. Potential impacts to local traffic conditions and greenhouse gas emissions.

15. The excavation of contaminated soils.

1.3 Proposed Mitigation Measures

The following mitigation measures will be associated with the design, construction and operation of RMU-2:

1. Installation of a double composite synthetic liner system and a cover system for the landfill that exceed USEPA's regulations promulgated January 29, 1992, entitled *Liners and Leak Detection Systems for Hazardous Waste Land Disposal Units* (57 Federal Register 3462).

2. Installation of a primary leachate collection system and secondary leachate collection/leak detection systems for the landfill.

3. On-site treatment of leachate before discharge pursuant to the Model City Facility State Pollutant Discharge Elimination System (SPDES) Permit.

4. Modification and maintenance of surface drainage in order to minimize infiltration and erosion.

5. Protection of berm slopes in order to minimize erosion.

6. Continuation of a Spill Prevention, Control and Countermeasures (SPCC) Plan.

7. Continuation of Air, Surface-Water and Groundwater Monitoring Plans.

8. Continuation of a Fugitive Dust Control Plan.

9. Use of equipment and continuation of operating procedures that will limit noise to acceptable levels.

10. Continued provision of emergency response equipment and trained emergency response personnel.

11. Continued patrol and surveillance of the unit by Model City Facility security personnel.

12. Protection and upkeep of final cover vegetation to minimize erosion.

13. Review of all waste streams per Model City facility's Waste Analysis Plan (WAP).

14. Pretreatment of selected waste streams prior to land disposal to meet USEPA and NYSDEC LDR criteria.

15. Federal wetland mitigation as determined by the United States, Department of the Army, Buffalo District, Corps of Engineers (USACE).

16. Stormwater runoff management.

17. Implementation of a post-closure plan for perpetual care that will ensure that the adequate funds for future maintenance and monitoring are available and

that the post-closure escape of hazardous waste, hazardous waste constituents, leachate, contaminated runoff or waste decomposition products to groundwater, to surface water or to the atmosphere is controlled, minimized or eliminated so as to protect human health and the environment.

18. Relocation of existing Model City Facility structures, buildings and operational areas from within the footprint of the proposed RMU-2 location, to new locations within the facility.

1.4 Alternatives Considered

The following alternatives were considered relative to the proposed action:

1. No action.
2. Different site alternative.
3. Landfill design alternatives, such as the use of different materials.

1.5 Regulatory Requirements

1.5.1 The State Environmental Quality Review Act and Hazardous Waste Facility Siting Processes

The State Environmental Quality Review Act (SEQR) became law in NYS on August 1, 1975. The purpose of SEQR is to incorporate into the planning, review and decision-making process of state, regional and local government agencies the consideration of environmental factors in addition to social and economic factors and to do so at the earliest possible time. SEQR requires a systematic interdisciplinary approach to review environmental factors during the planning stages of a project so that any modification to avoid significant adverse environmental impacts may be incorporated into the project prior to an irreversible commitment of significant resources. An important aspect of SEQR is public participation in the planning process. The regulations implementing SEQR are contained in Title 6 New York Codes, Rules and Regulations (6 NYCRR) Part 617.

SEQR requires a determination of the environmental significance of every action and, where there is a potential for significant environmental impact (i.e., a Positive Declaration or Type I Action), the preparation of an Environmental Impact Statement

3. Environmental Setting

3.1 Location of Proposed Action

The Model City Facility is located near Model City, New York in the Towns of Porter and Lewiston, Niagara County. The Model City Facility is situated along Balmer Road, 1.9 miles east of the intersection of Balmer Road and Creek Road (NYS Route 18). The Model City Facility occupies approximately 710 acres, including 630 acres of land in the Town of Porter and 80 acres of land in the Town of Lewiston. All existing TSDFs on the site are located within the Town of Porter. All land currently occupied by the Model City Facility in the Town of Porter is available for permitting by the NYSDEC for future activities to be proposed by CWM related to hazardous waste management. The nearest population concentrations are the Village of Lewiston, approximately 7 miles to the southwest; the Village of Youngstown, approximately 3 miles to the northwest and the Hamlet of Ransomville, approximately 2 miles to the east. The Lewiston-Porter Central Schools are located approximately 2 miles to the west. The Tuscarora Indian Reservation is approximately 4 miles to the south. Lake Ontario is situated approximately 4 miles north of the Model City Facility. Regional location and facility location maps showing the Model City Facility are presented as Figures 3-1 and 3-2. Owners of properties adjacent to the Model City Facility, as listed on the most recent tax maps for the Towns of Porter and Lewiston, are shown on Figure 3-12.

RMU-2 would be located in the area of the Model City Facility immediately adjacent to the western edge of existing RMU-1. RMU-2 would be bounded on the north by the existing stabilization facility, bounded on the west by the LTF and Hall Street and bounded on the south by SLF-1 through SLF-6 and SLF-10. The RMU-2 location is accessible by existing roads. A new access road would be constructed around the RMU-2 perimeter. As part of a former military complex, the site has a local grid and elevation system to provide control for construction and documentation. This grid system is monumented at the site with numerous permanent monuments. For clarity, the RMU-2 specific site descriptions, as well as the drawings, are provided in terms of this site grid system.

Passenger car access to the Model City Facility from the north or south is via the Robert Moses Parkway or other local roads; however, truck traffic is not permitted on the Robert Moses Parkway, so routes discussed in Section 3.6.3 must be used.

3.1.1 Previous Use of Property

The area, including and surrounding the Model City Facility, was, at one time in the early 1940s through mid-1960s, part of the LOOW of the DOD and was used for a variety of government activities during that time period. The past uses of the area include research, development and production of explosives and solid/liquid fuels; a missile base; a radar station and waste storage related to the Manhattan Project.

Production of trinitrotoluene (TNT) on the site was carried out for less than a year, between late 1942 and August 1943. However, some 18- to 24-inch-diameter acid lines remain on the CWM site, although many of them have been removed or decontaminated in the course of the construction and remedial operations. Results of tests run on samples of residues in the pipes taken in October 1982 indicate that no danger of detonation of these materials exists. The TNT waste pipelines were the subject of an interim remedial action conducted by the USACE in 1999/2000. The NYSDEC provided oversight on the work plan, field work and reporting of results. The residual contents were removed from the entire length of pipeline. Several sections of pipe were left in place after high pressure washing. A final determination on the Corrective Action for these pipes has not yet been made. Based on a review of historical records and the location and configuration of the former TNT process areas, no TNT pipelines are expected to be found during construction of RMU-2. However, if unidentified pipelines are encountered during construction, the lines would be sampled, removed and disposed in accordance with results of testing.

3.1.2 Site Radiological Background

The Model City Facility is located within the boundary of the former LOOW. Starting in 1944, the Manhattan Engineer District (MED) and its successor, the United States Atomic Energy Commission (AEC), used portions of the LOOW for the storage of radioactive wastes. These radioactive wastes were primarily residues from uranium processing operations. They also included contaminated rubble and scrap from decommissioning activities, waste from the University of Rochester and low level fission-product waste from Knolls Atomic Power Laboratory. Receipt of radioactive waste ceased in 1954 and cleanup activities ensued. A portion of the LOOW was declared surplus and was sold to various private, commercial and government agencies. In 1972, ChemTrol, a predecessor of CWM, initially leased about 350 acres of former LOOW property and started a waste TSDF. Between 1974 and 1978, CWM's predecessors purchased 710 acres of former LOOW property. These 710 acres are comprised of the land/parcels referred to as Vicinity Properties A through G

and parts of H, J, K, P, S, T and W. The locations of these Vicinity Properties are depicted on Figure 3-13. These properties now constitute the Model City Facility.

In 1970, the federal government determined that some of the properties that had been sold were not properly remediated. The AEC proposed cleanup to a specific level. The DOH disagreed with the proposed cleanup criteria. The DOH's concern was that if residences and buildings were built in these areas, additional exposure to radon, especially in the basements, could result. The AEC disagreed and did not change its criteria. During 1971 and 1972, a radiological survey and cleanup of the LOOW was performed by AEC. Several burial sites (including the University of Rochester animal burial area) were excavated and remediated. On April 27, 1972, the DOH issued four orders that imposed land use restrictions on most of the former LOOW properties. One of those orders referenced 614 acres owned by Fort Conti Corporation, but it did not contain any metes and bounds description and it incorrectly identified the property as primarily located in the Town of Lewiston. At that time, ChemTrol was leasing Fort Conti Corporation property in the Towns of Lewiston and Porter. Existing uses could continue without expansion. Any soil excavation was prohibited unless permitted by the Commissioner of the DOH. Shortly thereafter, ChemTrol requested that it be allowed to use its property for industrial/commercial purposes. The DOH issued an amended order in 1974 allowing industrial development on 240 acres of the ChemTrol property, complete with a metes and bounds description, as long as slab foundations were employed for any new buildings. However, the 1974 order did not remove or alter the soil excavation approval requirements stipulated in the 1972 order.

Since 1974, the DOE, as the successor to the AEC, has conducted additional remediation work at the former LOOW property, including the CWM property. In the 1980s, the DOE selected guidelines for remediating radiological contamination on this property and other sites formerly used by the AEC. In 1983, a comprehensive survey was performed by Oak Ridge Associated Universities. The status of each individual LOOW Vicinity Property was evaluated and described in a report entitled *Comprehensive Radiological Survey, Off-Site Property A-X, Niagara Falls Storage Site, Lewiston, NY*, dated March 1984. Additional remediation work was performed in 1985 and 1986.

In the mid-1970s, ChemTrol was purchased by SCA Services, Inc. (SCA). In 1984, Waste Management, Inc. (WMI) purchased certain parts of SCA, including the Model City Facility. The name was changed to CWM Chemical Services, LLC and it is currently a subsidiary of WMI.

On May 7, 1992, as a result of the extensive corrective radiological remedial actions undertaken on the Vicinity Properties by the DOE, the DOE certified that the Vicinity Properties were in compliance with applicable federal radiological decontamination criteria. The exceptions to the certification included three Vicinity Properties located on CWM's property (E, E' and G). Small portions of these Vicinity Properties could not be evaluated: soil beneath the berm of Lagoon 6 (Vicinity Property E), soil under two PCB storage tanks and roadway (Vicinity Property E') and soil beneath the berm of Fac Pond 1/2 (Vicinity Property G). As these areas could not be accessed for characterization and remediation, if warranted, the DOE could not certify these areas. None of the three isolated areas are in the footprint of the proposed RMU-2.

In 1983, Oak Ridge had performed a comprehensive survey of Vicinity Property E and identified "hot spots" in the berm of Lagoon 6, west of the proposed RMU-2 footprint. The characterization showed that the contaminant was Radium-226 and the source was small pieces of scrap metal and plaster-like chips (likely lead cake residue). The contaminants are not near the surface. The pieces in the berm were reported to be small and scattered. The DOE was unable to remediate this area because the berms held low strength sludge at that time. The sludge has since been stabilized and capped. There is no exposure to site workers or the general public as the items are small, scattered and subsurface.

The July 1990 DOE Report, *Verification of 1985 and 1986 Remedial Actions, Niagara Falls Storage Site, Vicinity Properties, Lewiston, New York*, documents that remediation was performed around the two PCB storage tanks (Tanks 64 and 65) in Vicinity Property E', but the DOE was unable to access the area under the tanks for characterization and remediation as necessary. The tanks have since been removed and the soil was characterized in 1995. The soil that was under the tanks showed slightly elevated levels of volatile organics and radioactivity. The DOE cannot certify Vicinity Property E' until this area is addressed. The area of Tanks 64 and 65 has been covered with HDPE and is in the center of CWM's aqueous wastewater treatment system (AWTS), west of the proposed footprint for RMU-2 and any related project activities.

The July 1990 DOE Report documents that remediation was performed around Fac Pond 1/2 in Vicinity Property G, but the DOE was unable to access the area under the pond for characterization and remediation as necessary. Fac Pond 1/2 is currently used for storage and final treatment of treated wastewater effluent from the AWTS. Transfer of the treated effluent from the final AWTS batch qualifier tanks to Fac Pond

1/2 is not performed until after the liquid in the tanks is tested and approved for discharge. Modification of Fac Pond 1/2 is part of the RMU-2 permit application.

Other areas affected by the proposed RMU-2 project include former Vicinity Properties B, C, D, F and K, which were certified as meeting the cleanup standards by the DOE in 1992. The 1984 status report documents where contamination was remediated in Vicinity Properties B and C. There is no evidence of the burial of contaminated materials in Vicinity Property D; however, several small isolated items were removed during sampling and characterization. Vicinity Property F has no history of waste burial, but was likely used for waste storage, where the source of a small area with an elevated radiation level was removed during sampling and characterization in 1985 and 1986. Vicinity Property K, located east of RMU-1, is the location for the new Drum Management Building. Vicinity Property K has no history of waste burial and has been recently used by the Model City Facility as a stockpile area for soil materials associated with RMU-1 cell construction and final cover construction.

Based on a separate DOE certification regarding the adjacent property, the owner, Modern Landfill, requested that the 1972 DOH order for its property be terminated. The DOH amended the order for the Modern Landfill property in 1982 and 1985, and DOH restrictions for excavation no longer apply. In December 2003, based on the 1992 DOE certification, CWM made a similar request asking that the DOH rescind the 1972/1974 orders for its property. During the ensuing discussions with the DOH and the NYSDEC, CWM also provided the agencies with its analysis of the statutory and regulatory changes that had been enacted and/or promulgated since 1972, noting CWM's opinion that from and after 1975 the State Legislature had removed from the DOH and transferred to the NYSDEC, the authority and responsibility to address any residual radiological contamination concerns related to the former LOOW property, including CWM's property. The DOH responded that it was unclear what impact those statutory changes had on the validity of the 1972 and 1974 orders.

In 2004, the DOH advised CWM that it had reviewed the DOE certification for the CWM property and had some concerns that the development of the CWM site during the 1970s and 1980s may have prevented the DOE from detecting all contamination that might still have been present. The DOH and the NYSDEC requested that CWM submit a plan for conducting radiological surveys of any areas where soil movement is proposed. In addition, because little radiological data had been obtained since the 1980s, the DOH and the NYSDEC requested that CWM conduct a site-wide radiological survey, as well as perform environmental monitoring for radiation, and the NYSDEC determined that it was appropriate to incorporate these requests into CWM's

Part 373 Permit. These requirements are included in CWM's Site-Wide Part 373 Permit issued on August 5, 2005. The NYSDEC has stated that although there are some gaps in the AEC's and DOE's documentation and investigation, procedures have improved over the last 30 years. The fact remains that the DOE did remove radioactive contaminants from the Vicinity Properties and the DOE surveys provide reasonable assurances that widespread, immediately dangerous radioactive contamination is not present on the surface of the property.

In order to confirm the findings in the DOE certification, the NYSDEC, acting in conjunction with the DOH, required that CWM conduct additional investigations to further evaluate the current conditions of the Model City Facility property. A major component of this evaluation included a gamma radiation walkover surface survey of all accessible areas of the property (approximately 450 acres); detailed investigation and sampling of those areas identified during the survey that exceed the accepted radiological investigation level and an alpha and beta radiation survey inside six legacy buildings that were previously used by the U.S. Government. URS Corporation (URS) (Buffalo, New York) completed the survey in 2008. The results of the survey are included in the report entitled *Results of Gamma Walkover Survey, Soil Sampling, and Legacy Building Surveys* (URS, December 2008).

The radiological survey at the Model City Facility conducted by URS determined that a vast majority of the accessible areas of the property were well below the screening level. Less than 0.15% of over 4 million readings collected during the survey exceeded the threshold of 16,000 counts per minute (cpm). The readings that exceeded the 16,000 cpm threshold were generally in small areas and were often associated with the discovery of discrete, high activity sources that were removed with the sampling effort. A few elevated source items were found in the clay liner of Fac Pond 8; however, most of the rocks with elevated activity were in the cap systems of landfills and isolated areas on site. The majority of these items were removed as part of the investigation and sampling effort. The radiological characteristics exhibited by the items found during the survey were consistent with the radiological materials that were historically managed on the site by the U.S. Government from the 1940s to the mid-1960s.

Areas where elevated sources were identified but the source material was not removed include the base of Fac Pond 8, the former Syms property and along the former railroad bed. With the exception of Fac Pond 8, these areas are not impacted by the RMU-2 project. URS determined that the presence of such items does not pose a significant health or environmental issues because of the relative isolation from site workers and the general public.

As required by the 2005 Part 373 Permit, CWM has conducted recent radiological monitoring of groundwater, surface water, treated wastewater and air. Initial results were submitted as part of the *Radiation Environmental Monitoring Plan* (CWM, March 2006). All results obtained to date show no elevated radiological constituents in any of these media. Sampling and radiological analysis is ongoing and will be continued until approval to terminate is received from the NYSDEC. In addition to the surface survey and environmental media testing, CWM conducted a chemical and radiological subsurface sampling program in areas that would be affected by the RMU-2 project between August 2008 and February 2009 (*Results of Subsurface Soil and Pond Sediment Sampling for RMU-2* [URS, April 2009]). These areas include the RMU-2 footprint, location of the relocated Drum Management Building, location of new Fac Pond 5, Fac Pond 3 and Fac Pond 1/2. Soil borings up to 20 feet deep were completed in a systematic grid based pattern within the areas of RMU-2, Fac Pond 5 and the Drum Management Building. The soil cores were scanned for chemical and radiological contamination. If the meter identified elevated readings, a sample was taken and sent off site for analysis. In addition, sediments from the floor of Fac Ponds 1/2 and 3 were radiologically screened and samples were obtained for radiological analysis.

Over 300 sample locations were evaluated during the subsurface investigation program. Only three locations exhibited levels that exceeded background levels. At one location within the original RMU-2 footprint (location 63), the boring contained some plastic pieces which likely were the source of the higher concentrations of radionucleids found in the adjacent soil. Two other locations within the original RMU-2 footprint (locations 43 and 61) found significant chemical contamination which is likely attributable to past historical activities on the property (*Letter Report on RMU-2 Footprint Investigation Boring Program* [Golder, March 2009]). As a result of these discoveries, the RMU-2 footprint was revised to exclude these three areas.

During 2010, a Radiological Characterization Investigation was performed of Fac Pond 8. During the investigation, Fac Pond 8 was divided into twelve, 2,000-square meter survey units. The investigation included gamma walkover surveys, the installation of 193 soil borings, and the collection of 207 soil samples from the soil borings. Readings above investigation levels were discovered within two of the survey units, and radiological contamination was verified through sampling and laboratory analyses. This effort demonstrated in accordance with MARSSIM guidance that all but two of the survey units are below the remedial standards developed for nearby FUSRAP sites and consistent with background concentrations.

A Remedial Action Plan (RAP) was prepared utilizing the data generated from the previous investigations to calculate the risk associated with various exposure scenarios and to derive an appropriate guideline level that can be used during Fac Pond 8 remedial activities. Remedial activities were performed between September and November 2011 and included the removal of soil with suspected MED material above established cleanup levels and the performance of a Final Status Survey (Completion Report for the Remediation of Facultative Pond 8, CWM Model City [Los Alamos Technical Associates, Inc., January, 2012]). Results of the remediation and FSS indicate that the area may be released for future development without the threat of MED radiological conditions above regulatory criteria.

CWM has developed a plan for performing chemical and radiological evaluation for routine small soil excavation projects. For smaller projects, chemical and radiological instrumentation will be used. Prior to any excavation, a radiological survey meter and VOC meter would be used to screen the soil surface prior to excavation. Investigation levels would be set to determine whether the excavation can safely proceed. Soil would be removed in approximately 6-inch lifts. During excavation, these same methods would be used on each lift prior to proceeding to the next deeper level. Finally, the radiological and chemical screening would be performed on the final excavated surface and the resulting stockpile of excavated soil. If readings higher than the investigation levels are detected at any stage, appropriate actions will be taken, such as stopping the excavation, characterization of the high reading, removal of suspect sources, detailed analysis of the contamination and disposal of the contaminated materials. For large project excavations, such as RMU-2, CWM has developed a similar plan for evaluating potential chemical and radiological contamination, which is included in Section K of the RMU-2 Part 373 Permit Application.

3.2 Geologic Resources

3.2.1 Topography

The Towns of Porter and Lewiston are part of the Iroquois Lake Plain. The plain is located north of the Niagara Escarpment, the northernmost major topographic feature in Niagara and Erie Counties. Both the elevation and relief of the land surface tend to increase from north to south. The Model City Facility is located on a flat plain forming a portion of the extended Lake Ontario shoreline natural grade. Ground elevations on the Model City Facility vary from 308 to 338 feet amsl. Surface drainage at and in the vicinity of the Model City Facility is generally to the north towards Lake Ontario.

TABLE 3-8 (Continued)
ECOLOGICAL COMMUNTIES:
RMU-1, TRUCK ROUTE AND REGION

System	Sub-system	Class	Definition [1]	Dominant [1] Species Observed [2,3]	Rank [4]	RMU-1	Truck Route	Region
Terrestrial		Successional shrubland	Shrubland community that occurs on land disturbed by logging, farming, or other activity.	Plants: Gray Dogwood, Staghorn Sumac, Wild Grape	4/4	X	X	X
	Forested uplands	Successional northern hardwood forest	Hardwood or mixed deciduous/coniferous forest occurring on sites cleared by farming, logging, or other disturbance activity.	Plants: Red Maple, Pine Oak, Cottonwood. Animals: White Tail Deer, Eastern Cottontail, Blue Jay, Chickadee, Crow, Redtail Hawk.	5/5	X	X	X
	Cultural	Cropland/row crops	Agricultural field planted in row crops.	Plants: Corn.	5/5		X	X
		Cropland/field crops	Agricultural field planted in field crops & rotated to pasture.	Plants: Alfalfa, Timothy	5/5		X	X
		Orchard	Stand of cultivated fruit trees.	Plants: Apple Trees	5/5			X
		Mowed lawn	Residential, recreational, or commercial land dominated by clipped grasses with tree cover less than 30%.	Plants: Grass Animals: Robin	5/5		X	X
		Mowed lawn with trees	Same as mowed lawn but with tree cover greater than 30%.	Same as Mowed Lawn.	5/5		X	X
		Mowed roadside/path way	Narrow strip of mowed vegetation along the side of the roadway, utility right-of-way, or similar.	Plants: Grasses	5/5	X	X	X
		Unpaved road/path	Sparsely vegetated road or pathway of gravel, soil, or bedrock outcrop.	Plants: Gray Dogwood, Grasses	5/5	X	X	X
		Paved road	Road or pathway paved with rock, cement, asphalt, etc.		5/5	X	X	

NOTES:
1: After Reschke, 1990.
2: See Tables 3-5 and 3-6 for scientific names.
3: Observed on March 24 and 26, 1992.
4: Heritage program rarity rank for state and world – 1 to 5 most to least rare.

3.5.4 Model City Facility

3.5.4.1 Proposed RMU-2 Site

The area for the RMU-2 site is approximately 43.5 acres that would be impacted due to construction and operations of the landfill. The following is a general description of the developed portions of the Model City Facility that is applicable to the proposed RMU-2

site, followed by a description of the portions of the facility applicable to the proposed Fac Pond 5, relocated buildings and operational areas.

The proposed RMU-2 site is located within currently developed areas of the Model City Facility. The area currently includes the existing Emergency Response Garage, Drum Management Building, Full and Empty Trailer Parking Areas, Heavy Equipment and Facility Maintenance Building, Fac Ponds 3 and 8, various site roadways, surface-water drainage ditches and utilities. Prior to the construction of RMU-2, all of the aforementioned facilities would be abandoned and/or relocated to the areas presented on Figure 2-6.

Wildlife species observed and likely to occur at the RMU-1 site (that is applicable to RMU-2) are listed in Tables 3-6 and 3-7. Observations and/or signs of deer, rabbits, raccoon, opossum and squirrel were most common in forested and shrubland areas in the Model City Facility outside the proposed RMU-2 site. According to the NYSDEC Significant Habitat Unit, two deer concentration areas have historically been located outside the property limits of the Model City Facility. These will not be impacted by the proposed project.

3.5.4.2 Other Impacted Areas

Other than the footprint of RMU-2, additional areas of the Model City Facility will be affected by the RMU-2 project. In order to compensate for the closure of Fac Ponds 3 and 8, a new Fac Pond 5 will be constructed between SLF-7 and SLF-12. The Drum Management Building will be relocated to an area east of RMU-1. The Full Trailer Park will be relocated immediately west of its current location. The Stabilization Trailer Park will be relocated north of its current location. The Heavy Equipment Maintenance Building will be relocated to an area north of Fac Ponds 1 and 2. New trailer transfer ramps for the SLF-10 Leachate Building and the SLF 1-11 Oil/Water Separator Building will be relocated to other sides of the existing buildings.

All of the land to be used for the above facilities has been previously cleared as part of the CWM operational area. The species composition of the ecological communities within these areas is similar to that at the proposed RMU-2 site.

3.5.4.3 Federal and State Wetlands Associated with RMU-2

In November 2002, a Wetlands Investigation was performed by Environmental Design & Research, P.C. (EDR) at the Model City Facility in the area of the proposed RMU-2

site and at the proposed locations for new and relocated facilities. During this investigation, EDR determined that RMU-2 and the new and relocated facilities would have no impact to state regulated wetlands, as verified by the NYSDEC. EDR also concluded that RMU-2 and the new and proposed locations for relocated facilities would impact less than 2 acres of jurisdictional federal wetlands (comprised of manmade ditches and isolated pockets of wetland areas).

EDR updated the RMU-2 wetlands delineation in April 2009. The investigation areas were redefined based on the current scope of the RMU-2 project (i.e., slightly redesigned landfill footprint and new locations of relocated facilities) as compared to the 2002 investigation. Results of this investigation are described in the *Wetland Delineation Report, RMU-2 Landfill Expansion Area*, dated June 2009. Again, EDR concluded that the RMU-2 project would have no impact to state wetlands and impact less than 2 acres of federal wetlands, pending confirmation by the USACE. EDR again updated the RMU-2 wetlands delineation in April 2011 to include an area within the RMU-2 development area that was not included in the previous delineations. Results of this supplemental delineation are described in the *Supplemental Wetland Delineation Report, RMU-2 Landfill Expansion Area*, dated April 2011. Again, EDR concluded that the RMU-2 project would have no impact to state wetlands and impact less than 2 acres of federal wetlands, pending confirmation by the USACE.

Appendix D presents the *Delineation Reports* prepared by EDR, dated June 2009 and April 2011, that describes the wetlands in the areas where RMU-2, Fac Pond 5 and the relocated facilities would be constructed.

A jurisdictional determination was received from the USACE on September 13, 2011. Approximately 2.5 acres of jurisdictional wetlands, as determined by the USACE, are located within the RMU-2 development area. The jurisdictional determination from the USACE is also included in Appendix D.

3.5.5 Threatened and Endangered Species

Information on the potential occurrence of threatened and endangered species at the RMU-1 project site was obtained through a September 1988 correspondence with the NYSDEC NHP, a literature review and during field investigations. The NYSDEC NHP record review identified three species of endangered plants that have been reported in the vicinity of the Model City Facility, these are small skullcap, finged gention and Ohio goldenrod. All the records of the species' occurrence are historical, the most recent being 1930 for small skullcap, 1833 for fringed gention and 1873 for Ohio goldenrod.

The literature review was conducted to supplement information from the NYSDEC NHP. Literature consulted for protected plant species included Mitchell and Sheivak (1981) and the NYSDEC list of endangered, threatened and special concern animals (NYSDEC, 1985). The list of special concern species was compared to their geographic range maps to assess their potential occurrence at the Model City Facility. Geographic range sources consulted included Connet (1975) for amphibians and reptiles, the NYS Breeding Bird Atlas (Anderle and Carroll, 1988) for birds and Hamilton and Whitacker (1979) for mammals. Potential habitat may exist for ginseng (*Panax quinquefolia*) in the northern hardwood forest community. This plant is not listed as threatened and endangered but is listed as "exploitively vulnerable" by the NYSDEC Protective Plant Program. It typically occurs in rocky gravelly soil and deciduous forests but is also know to occur in a variety of soils and forest types. The literature review indicated three salamander species, listed as special concern species, may potentially occur at the project site. Special concern species do not have legal protective status but are under study for potential listing. The three salamanders include the Jefferson salamander (*Ambvstoma ieffersonianum*), Blue spotted salamander (*A. laterale*) and the Spotted salamander (*A. maculatum*). Each of these salamanders inhabits wooded areas and breed in early spring in temporary wooded ponds. They are difficult to observe due to their reclusive habit of living under logs and leaf litter. The past and present habitat disturbances at this site make it an unlikely habitat for sensitive species.

Information on the potential occurrence of threatened and endangered species at the adjacent RMU-2 project site was obtained through a January 2003 correspondence from the NYSDEC NHP (Appendix E). Based upon the correspondence received from the NYSDEC NHP, there have been no recent observations of rare or state-listed animals and plants, significant communities and other significant habitats located within the proposed project site. The NYSDEC NHP database indicated that the last observation of rare or state-listed animals and plants, significant communities and other significant habitats at this location was in 1893.

3.6 Human Resources

3.6.1 Socioeconomics

3.6.1.1 Demographics

Land use in the vicinity of the Model City Facility is primarily residential, agricultural, government services and military. Within 1 mile of the Model City Facility, the

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June 29, 2012

Todd Farmen
Arcadis
295 Woodcliff Drive, Third Floor
Fairport, New York 14459

Re: EPA, DEC
CWM Chemical Services Proposed RMU-2
Expansion, Model City/LEWISTON, Niagara
PORTER, Niagara County
12PR02656

Dear Mr. Farmen:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

Based upon this review, it is the SHPO's opinion that your project will have No Effect upon cultural resources in or eligible for inclusion in the National Registers of Historic Places.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont

Ruth L. Pierpont
Deputy Commissioner for Historic Preservation

APPENDIX C

Draft Wetland Mitigation and Monitoring Plan

DRAFT WETLAND MITIGATION AND MONITORING PLAN

FOR THE

Residuals Management Unit 2 Expansion Area

Town of Porter, Niagara County, New York

Prepared for:

CWM Chemical Services, LLC
1550 Balmer Road
Model City, New York 14107

Prepared by:

edr Companies (edr)
274 North Goodman Street
Rochester, New York 14607
Contact: James B. Pippin
Phone: (585) 271-0040

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INTRODUCTION

CWM Chemical Services, LLC (CWM; the Applicant), is submitting a Joint Application for Permit to the U.S. Army Corps of Engineers (Corps) and the New York State Department of Environmental Conservation (NYSDEC). The permit application serves as a formal request for a permit from the Corps accordance with the conditions of Nationwide Permit Program (NWP) and to the NYSDEC in accordance with Section 401 of the Clean Water Act and New York State Environmental Conservation Law (ECL) Article 24 (Freshwater Wetlands).

The Applicant is proposing a 43.5-acre expansion of the existing CWM Model City Hazardous Waste Management Facility (Model City Facility or the Facility), located in the Town of Porter, Niagara County, New York (see Figure 1, Appendix A). This expansion (the Project) is needed to allow continued disposal of hazardous and industrial nonhazardous waste at the Model City Facility. The currently active landfill (Residuals Management Unit 1, or RMU-1), the only commercial land disposal facility in the northeast United States, is approaching full capacity. The proposed expansion will be designated Residuals Management Unit 2 (RMU-2), and will be located within the property boundaries of the Model City Facility. The proposed landfill has been designated a residuals management unit, and will therefore only accept wastes, waste treatment residuals, and industrial non-hazardous wastes that meet United States Environmental Protection Agency (USEPA) and NYSDEC Land Disposal Restrictions.

The proposed RMU-2 footprint includes land currently occupied by two Facultative (Fac) ponds designated as Fac Pond 3 and Fac Pond 8. Fac Pond 8, located immediately west of RMU-1, is permitted for storage of treated wastewater. Fac Pond 8 is currently out of service and undergoing closure, which is expected to be completed prior to RMU-2 permitting. In order to compensate for the treated wastewater volume reduction due to the removal of Fac Ponds 3 and 8, existing Fac Ponds 1 and 2, located west of SLF-1 through SLF-6, will be upgraded and a new Fac Pond 5 will be constructed between SLF-12 and SLF-7. The Fac Ponds 1 and 2 is approximately 7.1 acres in size and the upgrade will be performed within the existing footprint of the pond. Proposed Fac Pond 5 is approximately 7.7 acres in size.

The existing Drum Management Building, located west of RMU-1, is located within the footprint of RMU-2. A new Drum Management Building is to be located east of RMU-1. The new Drum Management Building will include facilities for storage of drums and other small containers, offices, a laboratory and mechanical room.

The proposed Project requires disturbance/excavation of large contiguous areas of land, which limits opportunities for minimizing/avoiding wetland impacts. Based upon Project design and engineering completed to date, construction activities will result in permanent loss of 2.567 acres of federally-jurisdictional wetlands. However, the natural surface

water hydrology and/or vegetation have been altered to such an extent that limited wetland functions and values remain. No temporary disturbance to wetlands or conversion of forested wetlands to other wetland communities will occur. No NYSDEC freshwater wetlands will be impacted, however approximately 0.74 acres of 100-foot adjacent area will be impacted.

To mitigate for the unavoidable permanent loss of wetlands and 100-foot adjacent area within the Project Site, the Applicant proposes the construction of a 4.3-acre wetland and the preservation of 11.6 acres of existing wetlands and associated uplands on a 21-acre parcel of land owned by CWM immediately west of the RMU-2 site. This parcel is currently dominated by successional deciduous forest, but also includes areas of disturbed land, successional old field, and approximately 5 acres of forested and emergent wetland communities.

The following narrative describes the mitigation goals and objectives, including information on mitigation area design characteristics, planting plans, hydrology, and monitoring. The mitigation plan described herein is based upon the requirements in the Code of Federal Regulations (33 CFR 332), the Final Rule of the Corps Compensatory Mitigation for Losses of Aquatic Resources, published in the Federal Register on April 10, 2008.

1.0 RESTORATION PROJECT GOALS AND OBJECTIVES

The development of the Project will result in permanent impacts to approximately 2.567 acres of federally jurisdictional wetlands. To mitigate for unavoidable, direct wetland impacts associated with the Project, approximately 4.3 acres of successional wetlands will be created on-site, designed to succeed from scrub-shrub into forested wetlands. This represents a mitigation ratio of approximately 1.7 to 1 (mitigation to impact) for direct impacts to wetlands/streams.

The goals of the proposed wetland mitigation area are to offset the cumulative wetland loss associated with development of the Project. The proposed wetland mitigation area will be designed and constructed in a manner that will provide the following functions:

- Stormwater detention and water quality improvement
- Improved sediment and nutrient retention
- Habitat for wetland plant species
- Waterfowl and amphibian habitat
- Passerine bird nesting, feeding, and resting habitat

2.0 SITE SELECTION

The mitigation site is an approximate 21 acre area and was selected as the preferred location for the wetland mitigation area for the following reasons: 1) proximity to the impact site within the Model City Facility, 2) its location within the same watershed, and 3) its hydrologic connectivity to on-site jurisdictional wetlands.

In addition, as described in Section 4.2, soils at the mitigation site are mapped as Made land and Rhinebeck silt loam, which are both classified as hydric (NRCS, 2012a). Locating the proposed mitigation area within a site with hydric soils suggests that properly designed and implemented hydrological modifications could create conditions that would support facultative wetland plant species, and therefore indicate a suitable mitigation area.

3.0 SITE PROTECTION INSTRUMENT

CWM shall place a perpetual deed restriction, in the form of a conservation easement, on the mitigation site to protect the compensatory wetland mitigation area and adjacent uplands in perpetuity and guarantee its preservation. The conservation easement will protect a total of 15.94 acres. The Applicant shall provide an approved certified copy of the recorded deed restriction to the Corps no later than December 31 the year construction starts or within 30 days after it is recorded or by approved extension date. It is anticipated that the site protection instrument will be the Corps "boilerplate" covenant language included in Appendix B.

4.0 BASELINE INFORMATION

CWM's Model City Facility is situated along Balmer Road, 1.9 miles east of the intersection of Balmer Road and Creek Road (NYS Route 18) near Model City, New York. The nearest population concentrations are the Village of Lewiston, approximately seven miles to the southwest; the Village of Youngstown, approximately three miles to the northwest and the Hamlet of Ransomville, approximately two miles to the east. The Facility occupies approximately 710 acres, including 630 acres of land in the Town of Porter and 80 acres of land in the Town of Lewiston. All existing treatment, storage, and disposal facilities are located within the Town of Porter.

Located approximately four miles south of Lake Ontario, the Facility is within the Ontario Plain section of the Central Lowland physiographic province of New York. The Ontario Plain extends from the shore of Lake Ontario to the foot of the Niagara Escarpment. Elevation of this province within Niagara County ranges from 250 feet above mean sea level (amsl) along the lakeshore to 390 feet amsl located at the base of the Niagara Escarpment located in the Town of Lewiston, New York (NRCS, 1972). Land uses in the vicinity of the site include a municipal landfill, a United States National Guard training area, disturbed but undeveloped woodlands, rural residential areas, and agricultural lands.

The Facility is located in the Great Lakes Drainage Basin, and is part of USGS Hydrologic Unit 04130001 of the Oak Orchard-Twelvemile Watershed. In Niagara County, total annual precipitation averages 37 inches (NRCS, 2012b) throughout its watersheds. The majority of surface hydrology on the Project site is generated by precipitation and surface water run-off from adjacent land. A series of ditches drain the Model City facility, connecting on-site wetlands to other off-site hydrological features and draining into Fourmile Creek and Twelve Mile Creek, which discharge into Lake Ontario.

4.1 IMPACT SITE

Existing plant communities at the proposed RMU-2 expansion (the impact site) were identified and characterized through interpretation of aerial photographs, reconnaissance-level field surveys, and wetland/stream delineation surveys. The impact site consists largely of previously disturbed/developed land, and therefore lacks significant areas of natural vegetation. On-site vegetation can be characterized as maintained (regularly mowed), old-fields with interspersed patches of maintained lawn, deciduous forestland, and shrubland vegetative communities. In addition, a number of small wetland vegetative communities were observed, including emergent, emergent/scrub-shrub, emergent/scrub-shrub/forested, and scrub-shrub forested wetland communities. However, the majority of on-site wetlands are essentially drainage ditches that are part of the man-made stormwater management system. A Wetland Delineation Report and Supplemental Wetland Delineation Report were prepared for the Project Site and

were submitted to the Corps in June of 2009 and April 2011. A jurisdictional determination (JD) was issued by the Corps on September 13, 2011. Table 1 below summarizes the proposed impacts at the impact site.

Table 1. Permanent Impacts to Wetlands and Streams

Wetland ID	Community Type	Permanent Impact (Square Feet)	Permanent Impact (Acres)	Permanent Adjacent Area Impact (Square feet)
G	PEM	17,052.5	0.391	--
	Drainage	793.4	0.018	
H	PEM	1,596.3	0.037	--
I	PEM	1,406.9	0.032	--
	Drainage	3,017.3	0.069	
J	PFO	19,779.1	0.454	--
	PEM Drainage	15,599.8	0.358	
K	PEM	14,630.4	0.336	--
	Drainage	11,384.3	0.261	
M	PFO	11,627.3	0.267	--
	PSS	1,560.6	0.036	
	PEM	1,887.3	0.043	
	Drainage	12,341.2	0.283	
N	PEM	46.4	0.001	--
	Drainage	702.1	0.016	
O	PFO	615.0	0.014	--
	PSS	531.7	0.012	
	Drainage	360.1	0.008	
Drum Wetland	PFO	--	--	32,171
Total: 111,808 Square Feet (2.567 Acres)				
Community Type (Acres) - PFO: 0.734 , PSS: 0.048, PEM: 0.84, PEM Drainage: 0.358, Drainage: 0.587				

Notes: PSS = Palustrine Scrub-Shrub Wetland; PEM = Palustrine Scrub-Shrub Wetland; PFO = Palustrine Forested Wetland.

NYSDEC stream mapping indicates that one Class C unprotected stream occurs within the impact site. This stream is an unnamed tributary of Fourmile Creek and occurs within the Oak Orchard-Twelvemile United States Geologic Survey (USGS) hydrologic unit 04130001, which is part of the Southwestern Lake Ontario drainage basin. Activities

that would alter or disturb this stream, and/or hydrologically connected wetlands, require a permit from the Corps under Section 404 of the Clean Water Act. Since the NYSDEC does not regulate Class C streams, a permit under Article 15 of the Environmental Conservation Law (ECL) is not required.

Review of NYSDEC mapping indicates that there is one NYSDEC-mapped wetlands (RV-8) regulated under Article 24 located adjacent to the new Drum Management Building area of disturbance. Review of NWI mapping indicates that multiple federally mapped wetlands occur in the area, three of which occur within the impact site. Each of these wetlands are classified as PUBKHx (Palustrine, Unconsolidated Bottom, Artificially Flooded, Permanently Flooded, and Excavated) and correspond to Facultative Ponds, which are man-made reservoirs constructed to store treated waste water. As they are engineered components of the working Model City, the Facultative Ponds are not considered to be jurisdictional waters of the U.S. One additional federally mapped wetland, identified as PFO1/4Bd (Palustrine, Forested, Broad-Leaved Deciduous, Forested, Needle-Leaved Evergreen, Saturated, and Partially Drained/Ditched) is located immediately adjacent to the impact site.

edr wetland biologists conducted wetland and stream investigations at the impact site during the Spring of 2009, 2011, and July 2012. The 15 delineated wetland areas within the Project Site cumulatively totaled approximately 3.25 acres and were primarily emergent communities dominated by common reed and sedges, as well as scrub-shrub communities dominated by silky dogwood and willows. Only three wetlands identified by edr personnel included forested communities. The wetlands were all characterized by hydric soils and clear indicators of wetland hydrology at the time of Site investigation. Eight of these areas are associated with the stormwater management system (SPDES Permit # NY 0072061) and do not offer the structural or functional attributes inherent to natural waters of the U.S. Even in the on-site wetland areas where the land appears relatively undisturbed, the natural surface water hydrology and/or vegetation have been altered to such an extent that limited wetland functions and values remain.

4.2 MITIGATION SITE

There are no NWI or NYSDEC wetlands or NYSDEC protected streams mapped within the mitigation site (Figure 2, Appendix A). According to soils mapping for Niagara County (NRCS, 1972) (Figure 3, Appendix A), the majority of the mitigation site is underlain by soils mapped as “Made land.” This soil type is filled with stones, old masonry materials, brick, and other waste covered with a thin mantle of soil material. A small area of Rhinebeck silt loam soil is also mapped as occurring within the mitigation site. Both the Rhinebeck silt loam and Made land mapping units are classified as hydric (NRCS, 2012a).

Existing ecological communities at the 21 acre mitigation site, a portion of which is the proposed mitigation area, were mapped based on interpretation of aerial photography, and then verified in the field by edr biologists on May 22, 2012. Following field reconnaissance and aerial photo review, vegetative community boundaries were digitized, and approximate acreages calculated through the use of GIS analysis. The mitigation site contains five ecological communities: upland deciduous forest (10.27 acres), disturbed/developed (4.95 acres), forested wetland (3.05 acres), emergent wetland (2.07 acres), and successional old-field (1.15 acres). See the Wetland Delineation Report in Appendix C for further detail about the existing wetlands at the mitigation site.

Existing hydrologic sources at the mitigation site are primarily from rainfall. The applicant has several water table groundwater monitoring wells in the vicinity of the mitigation site. One existing monitoring well is at the east boundary of the proposed conservation easement. Groundwater elevation measurements were obtained from this well in October 2011, April and October 2012, and April 2013 and ranged between approximately 304 feet amsl in the Fall of 2011to 318 feet amsl in the Spring of 2012. At this location the ground surface is approximately 319 feet amsl. This indicates that the groundwater table ranges from approximately 1 to 15 feet below the ground surface. Other nearby monitoring wells recorded ground water elevations to be between 3 and 11 feet below the ground surface.

5.0 DETERMINATION OF CREDITS

The RMU-2 expansion will result in permanent impacts to approximately 2.567 acres of jurisdictional wetlands (Impacts by community type (acres) - PFO: 0.734, PSS: 0.048, PEM: 0.84, PEM Drainage: 0.358, Drainage: 0.587). To mitigate for unavoidable, direct wetland impacts associated with the Project, approximately 4.3 acres of successional wetlands (mitigation area) will be created on-site in a disturbed/developed area, designed to succeed from scrub-shrub into forested wetlands. This represents a mitigation ratio of approximately 1.7 to 1 (mitigation to impact) for direct impacts to wetlands/streams.

Most of the wetland areas to be impacted are associated with the Facility stormwater management system and do not offer the structural or functional attributes inherent to natural waters of the U.S. Even in the wetland areas where the land appears relatively undisturbed, the natural surface water hydrology and/or vegetation have been altered to such an extent that limited wetland functions and values remain. Therefore, the mitigation ration of approximately 1.7 to 1 is more than adequate to offset the unavoidable impacts to aquatic resources.

6.0 MITIGATION WORK PLAN

No construction activities pertaining to wetlands impacts or mitigation have been initiated or completed to date. Mitigation will be implemented prior to or concurrent with the authorized impacts. Construction activities pertaining to wetland/stream impacts and mitigation will include:

- survey and stakeout
- erosion control/silt fence installation
- excavation of wetland mitigation areas to subgrade
- clearing and grubbing of impacted wetland areas
- construction-related disturbance to the authorized portion of wetlands and streams on-site
- finalize mitigation area subsoil contouring
- verify proposed grade/elevation of mitigation area through survey
- adjust subgrade as necessary
- spread reserved topsoil
- seed mitigation area basin and adjacent area
- plant woody vegetation

Construction in the project area and the mitigation area is anticipated to commence in 2014 or 2015. The impact areas will be staked out and lined with silt fence prior to clearing and grubbing activities in accordance with a Stormwater Pollution Prevention Plan (SWPPP). Installation of orange protective fencing around the area of wetlands that are to be preserved will remain throughout the duration of construction activities.

6.1 MITIGATION DESIGN SPECIFICATIONS AND CHARACTERISTICS

Conceptual construction grading and planting plans and specifications for the compensatory wetland mitigation area were prepared by edr ecologists and registered landscape architects. Specifications for mitigation topsoil placement, seeding, and planting are included as Appendix D.

Wetland hydrology for the mitigation area will be provided by direct precipitation and runoff from adjacent upland areas. Annual precipitation rates over 30 years (1971-2000) at the Buffalo Niagara monitoring station average 40.54 inches (NOAA 2004). Given local precipitation rates, the hydric soils at the mitigation site, the depressional nature of the proposed mitigation area, and its landscape position, it is anticipated that soils will be saturated in the compensatory mitigation area for sufficient time to promote the growth of hydrophytic vegetation. In addition, nearby

groundwater data indicates that the seasonally high groundwater table has the potential to supply the mitigation site with hydrology.

Proposed grading within the wetland mitigation area is designed to lower ground elevation to achieve saturated soil conditions. Topsoil will be stripped from the proposed wetland mitigation area and temporarily stockpiled. The areas will then be excavated 6 to 12 inches below the final elevation. Topsoil will be redistributed throughout the mitigation area to achieve final grades. The soils will be distributed in a rough manner so as to create uneven microtopography and variability in hydrologic conditions. Grading will be designed to create conditions conducive to development of a successional wetland community that will transition from scrub-shrub to forest.

After final grading is completed, all disturbed areas within the new wetland will be seeded with a native seed mix, as detailed in the seeding specification (see Appendix D). In addition, a 50/50 seed mixture of wetland and upland grass species will be applied to any disturbed upland surrounding the mitigation area for erosion control and to provide a vegetated wetland buffer. The buffer will also serve as a transitional zone from the wetland to upland vegetative communities.

6.2 VEGETATION AND SOILS

The mitigation areas will be vegetated by seeding with Ernst retention basin wildlife mix (ERNMX-127), a combination of native species that provide food and cover for various wildlife species. Dominant species by percentage include fox sedge, fowl bluegrass, Virginia wild rye, deer-tongue grass, lurid sedge, blue vervain, and green bulrush. To encourage the growth of woody wetland vegetation, the wetland shrub seed mix will be supplemented with ball and burlap plantings of black willow, green ash, and red maple tree seedlings and gray dogwood shrubs. Detailed specifications for Mitigation Area Seeding and Planting are included as Appendix D.

Native/on-site subsoil and topsoil will be used as the substrate for the created wetland mitigation area. Soils in the mitigation site are primarily mapped as Made land, with a lesser amount of Rhinebeck silt loam, both classified as hydric soils (NRCS, 2012a). Detailed specifications for Mitigation Area Topsoil Placement are included in Appendix D.

A potential threat to the mitigation site and adjacent wetland and stream resources is the risk of introduction or spread of invasive vegetative species, through the movement of topsoil, fill, gravel, and construction equipment. Such activities will occur during construction of the Project. The Applicant will utilize the Invasive Species Control

Plan (Appendix E) during construction and monitoring of the mitigation area in order to identify and control the spread of invasive species.

7.0 MAINTENANCE PLAN

The mitigation area will be reviewed once annually by a staff member of the Applicants facilities operation staff (for up to five years after the mitigation area construction is complete. Inspections shall be conducted during the growing season (May – October). All inspections will be done on foot; vehicular access to the wetland area is prohibited. The inspector shall be experienced in this type of work, and shall have a working knowledge of wetland and invasive plants.

The maintenance plan addresses all post-construction maintenance, repair, and replacement of landscape features on-site, including:

1. Invasive and nuisance plant species control – the perimeter and interior of the compensatory wetland mitigation area shall be inspected for the establishment of invasive plant species.

2. Litter removal – remove and haul away any debris from the compensatory wetland mitigation area. Avoid removal of tree branches, logs, or stumps.

3. Response to any recommended remedial plans – the specific maintenance and/or repair activities that may be indicated in monitoring reports are not known at this time (see Section 9.0). Typical post-construction maintenance activities could include: reseeding or supplemental seeding, replanting or supplemental planting, implementation of herbivory deterrents, removal of undesired plant species, and repair of topsoil in area exhibiting erosion.

All mowing and/or mechanized cutting shall be prohibited within the compensatory mitigation areas. Additionally, no mowers or other vehicles shall enter the upland slope area of the mitigation areas. The application of herbicides to control invasive species shall be avoided, unless specified in the annual monitoring report (Section 9.0).

8.0 PERFORMANCE STANDARDS

The goals of the proposed wetland mitigation are to off-set cumulative wetland loss associated with construction of the Project, at a ratio of approximately 1.7 to 1 (mitigation to impact). The proposed wetland mitigation area has been designed and will be constructed to provide the following functions:

- Stormwater detention and water quality improvement
- Improved sediment and nutrient retention
- Habitat for wetland plant species
- Waterfowl and amphibian habitat
- Passerine bird nesting, feeding, and resting habitat

Success criteria for the 4.3-acre compensatory wetland mitigation area will include the following: 1) 85% vegetative cover, 2) 85% coverage by plant species with an indicator status of FAC or wetter, and 3) 50% coverage by plant species with an indicator status of FACW or wetter (including at least one OBL species).

An annual report will be prepared documenting the success of the mitigation area. The annual report will present collected vegetation and hydrologic data, photographic documentation, and a qualitative description of the progress of the mitigation effort (see Section 9.0 for additional detail).

9.0 MONITORING REQUIREMENTS

Following construction of the mitigation area, a monitoring plan will be implemented to assure success of the mitigation area in accordance with permit requirements. Monitoring procedures, success criteria, and reporting requirements are proposed as follows:

1. The Applicant will submit an "as built" survey documenting construction of the required acreage of wetland (in accordance with the final wetland mitigation plans). Survey to be submitted to the Corps by December 31 of the year of completion of all mitigation construction activities.

2. The Applicant will perform annual monitoring for up to 5 years, starting one year after construction of the mitigation area, to take place between July 1 and October 15 of each year. The monitoring effort shall be documented in a report to include:

    - A complete list of established vegetation,
    - A list of dominant species of each community type with relative percent cover occupied by each type,
    - Photographs taken from fixed locations and indicated on a vegetative cover type map,
    - Water depth and date of measurement from representative, fixed locations within the mitigation area. Water levels will be inspected by either surface water inspection (visual indicators) or by shovel testing to a depth not to exceed 12".

3. Success criteria for the 4.3 acre compensatory wetland mitigation area will include the following: 1) 85% vegetative cover, 2) 85% coverage by plant species with an indicator status of FAC or wetter, and 3) 50% coverage by plant species with an indicator status of FACW or wetter (including at least one OBL species). An annual report will be prepared documenting the success of the mitigation area. The annual report will present collected vegetation and hydrologic data, photographic documentation, and a qualitative description of the progress of the mitigation effort.

4. At the end of a given monitoring season, the Applicant shall evaluate the functions and values of the created wetland area. The evaluation will be presented in a report that addresses hydrology, flood storage, sediment control, and wildlife values (same report as discussed in #3 above).

5. After the second full growing season, if annual monitoring shows that coverage by wetland plant species within the mitigation area is 85% or greater, then third and fourth year monitoring will be limited to

photographic documentation and a qualitative status report. A full monitoring effort, as described in #2 above, will again be undertaken and a monitoring report submitted to the Corps at the end of the fifth full growing season.

If the success criteria are not met at the end of the third monitoring season, the Applicant will prepare a remediation plan outlining all practicable steps taken, or proposed to be taken, to achieve the success criteria described in #3 above. The plan will be submitted to the Corps Buffalo District office and implemented as approved.

10.0 LONG-TERM MANAGEMENT PLAN

As indicated in Section 3.0, CWM shall place a perpetual deed restriction, in the form of a conservation easement, on the mitigation site to protect the compensatory wetland mitigation area and adjacent uplands in perpetuity and guarantee its preservation. The conservation easement will protect a total of 15.94 acres.

The Applicant will continue to ensure that the mitigation site continues to function and is maintained as outlined in Sections 7.0 and 9.0 for a period of up to five years after the mitigation area construction is complete.

To ensure the long term viability of this wetland mitigation site, the Applicant or any future deed holder will monitor the site. Any corrective actions and their subsequent cost will be the responsibility of the deed holder.

11.0 ADAPTIVE MANAGEMENT PLAN

If success criteria are not met at the end of the third monitoring season, the Applicant will prepare a remediation plan outlining all practicable steps taken, or proposed to be taken, to achieve the success criteria described in Section 8.0. The plan will be submitted to the Corps' Buffalo District office and implemented as approved.

12.0 FINANCIAL ASSURANCES

The Applicant assumes the financial responsibility to design, construct, maintain, protect, and manage the created wetland mitigation area on site for a time of 5 years post construction. In addition, CWM shall hold a 10% retainage on the contractor until satisfactory completion of work is attained.

Any corrective actions required beyond the 5 year monitoring period will be financed by the Applicant or future deed owner.

REFERENCES

Natural Resources Conservation Service (NRCS). 1972. *Soil Survey of Niagara County, New York*. United States Department of Agriculture Soil Conservation Service, in cooperation with Cornell University Agricultural Experiment Station. October 1972.

NRCS. 2012a. *New York Portion of the 2012 National Hydric Soil List*. Available at: http://soils.usda.gov/use/hydric/ (Accessed June 12, 2012). Last updated April 2012.

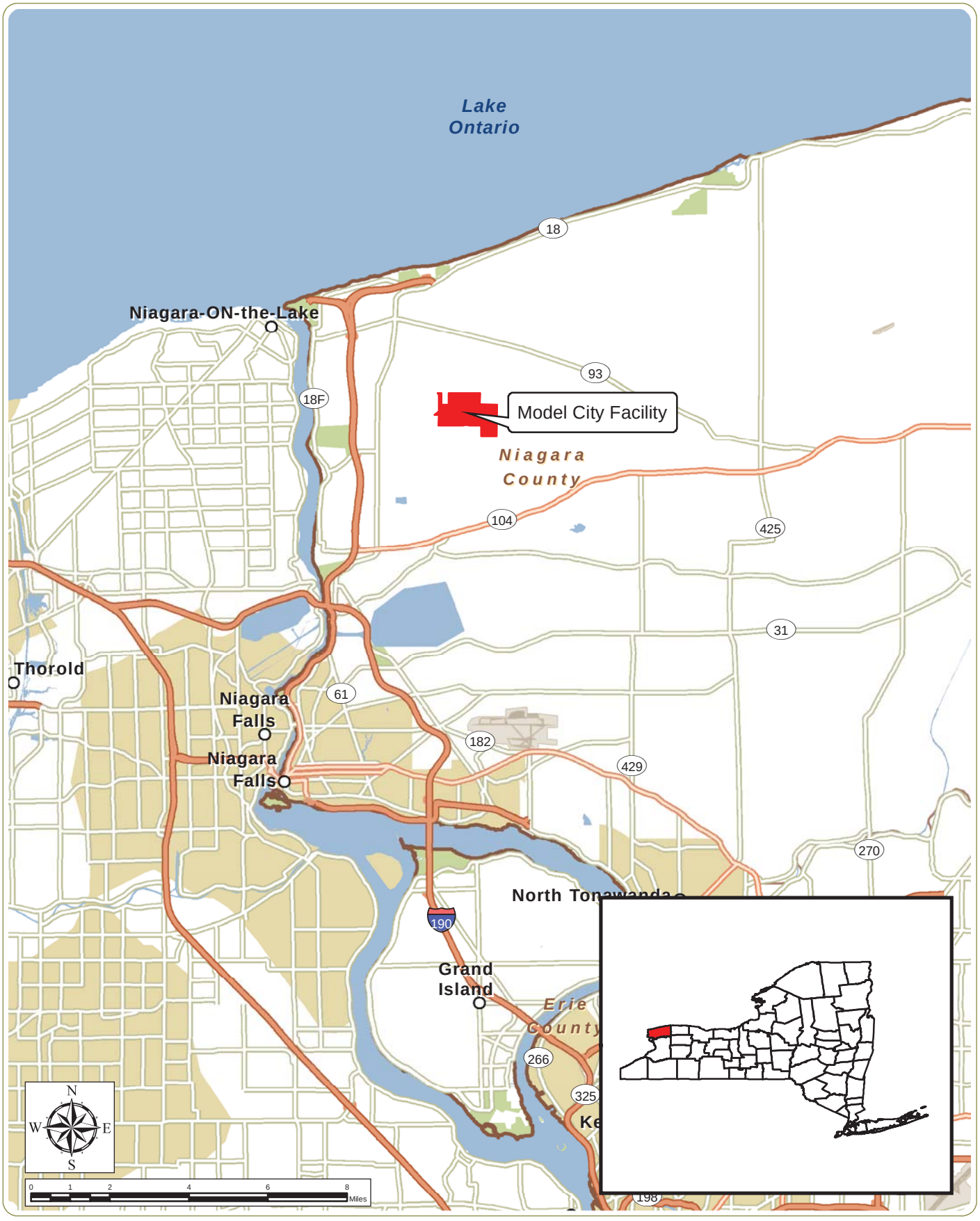
NRCS. 2012b. *Temperature and Precipitation Summary (TAPS) for Niagara County, 1971-1999*. U.S. Department of Agriculture, National Water and Climate Center. Available at: http://www.wcc.nrcs.usda.gov/ftpref/support/climate/taps/ny/36063.txt (Accessed June 2012).

National Oceanic & Atmospheric Administation (NOAA). 2004. *Climatography of the United States No. 20 1971-2000 Station Buffalo Niagara Intl, NY.* U.S. Department of Commerce National Oceanic & Atmospheric Administation National Environmental Satellite, Data, and Information Service. Available at http://cdo.ncdc.noaa.gov/cgi-bin/climatenormals/climatenormals.pl?directive=prod_select2&prodtype=CLIM20&subrnum= (Accessed October 2012).

Draft Wetland Mitigation and Monitoring Plan

APPENDIX A

Figures



RMU-2 Landfill Expansion

Town of Porter - Niagara County, New York

Figure 1: Regional Location Map

June 2013

Notes: Basemap: ESRI Streetmap North America 2012.

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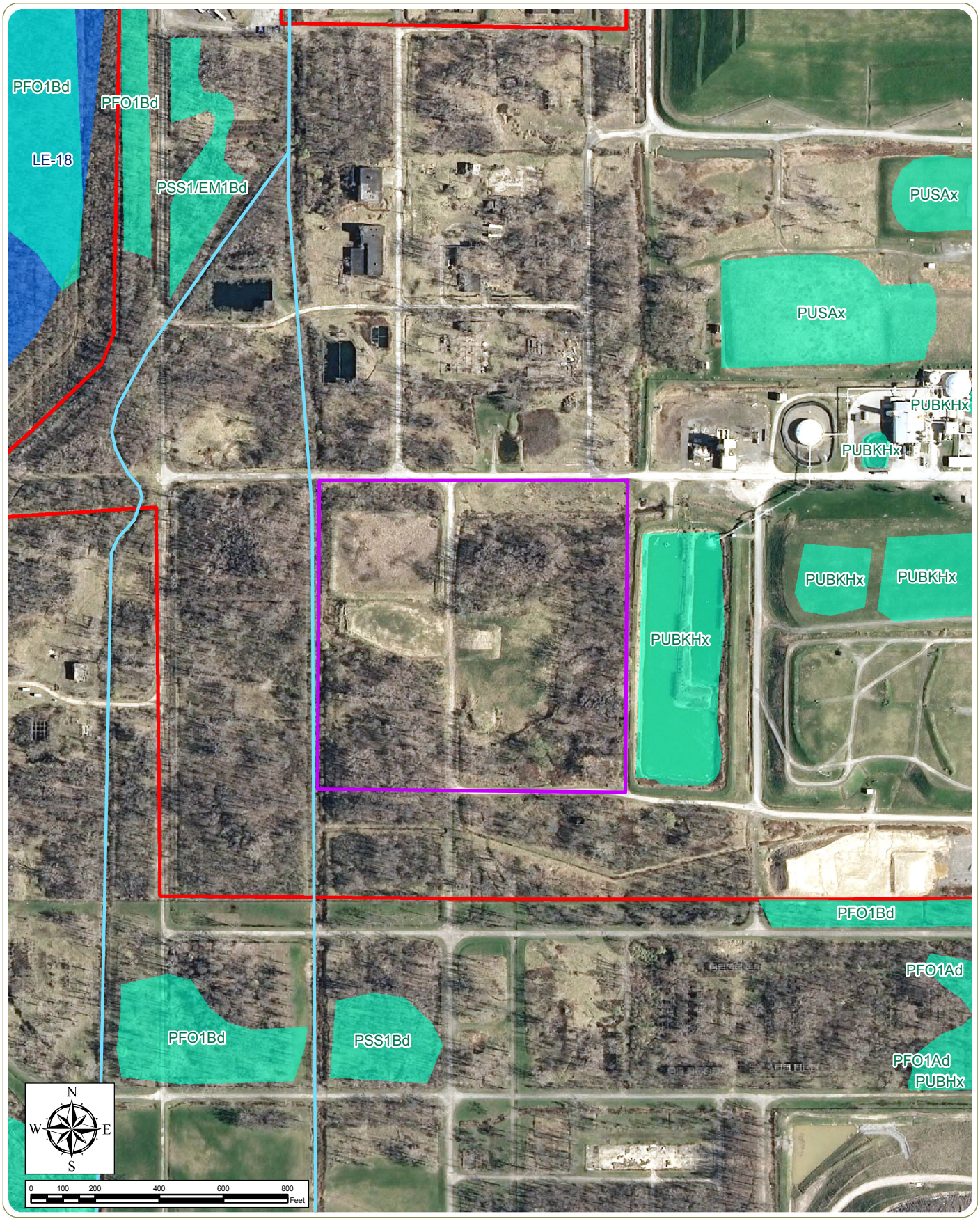

RMU-2 Landfill Expansion

Town of Porter - Niagara County, New York

Figure 2: NWI and NYSDEC Mapped Streams and Wetlands

July 2013

Notes: Basemap: NYS Orthoimagery 2011, 1ft resolution.

- Unprotected Streams
- NYS Protected Streams
- Model City Facility
- Wetland Mitigation Area
- NWI Wetland
- NYSDEC Mapped Wetland

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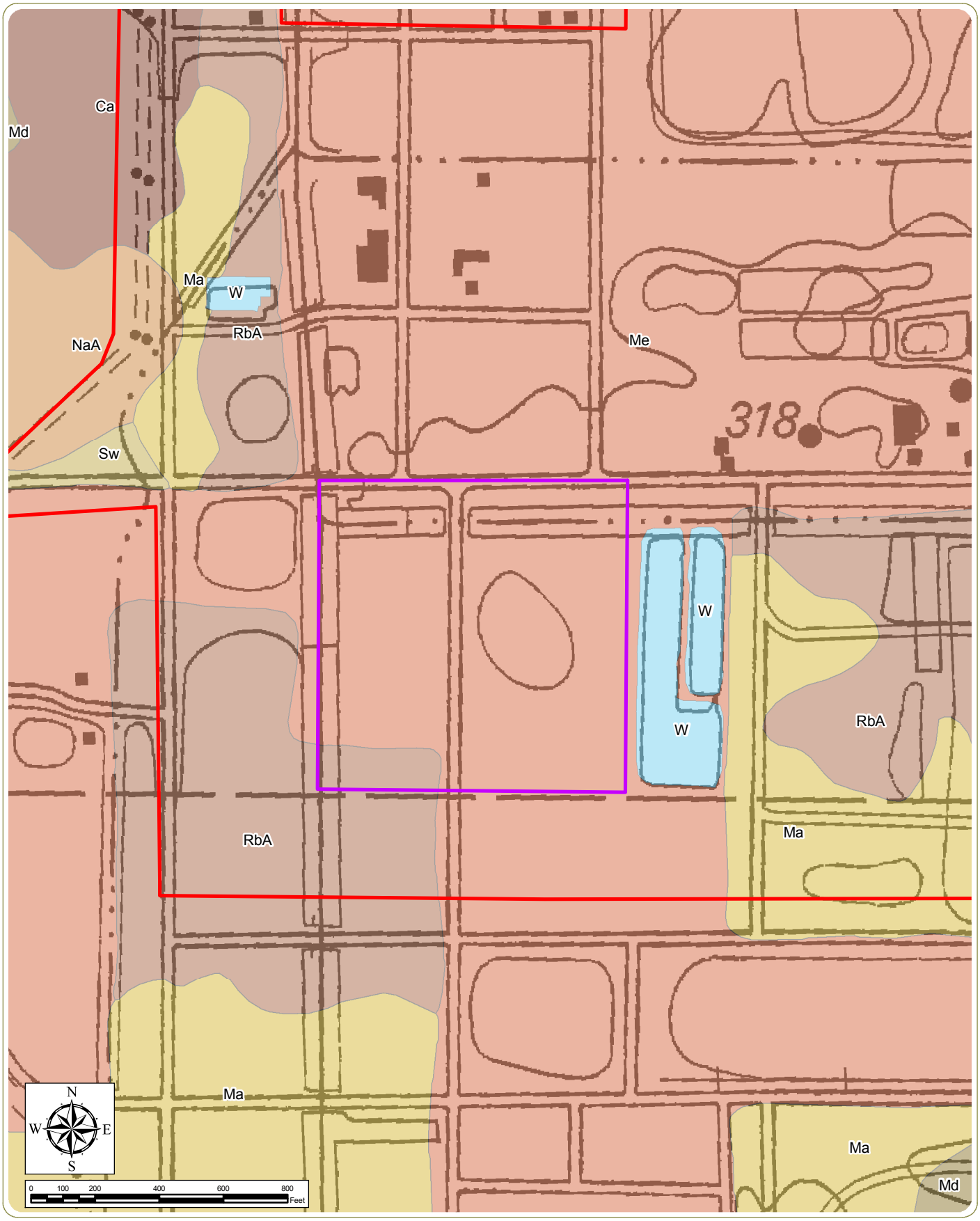

RMU-2 Landfill Expansion

Town of Porter - Niagara County, New York

Figure 3: Mitigation Site Soils

July 2013

Notes: Basemap: NYSDOT 1:24,000 Quadrangle, Ransomville.

- Wetland Mitigation Area
- Model City Facility

- Ca - Canandaiqua silt loam
- Ma - Madalin silt loam
- Md - Madalin silt loam, loamy subsoil variant
- Me - Made land
- NaA - Niagara silt loam
- RbA - Rhinebeck silt loam
- Sw - Sun silt loam
- W - Water

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Draft Wetland Mitigation and Monitoring Plan

APPENDIX B

Protection Instrument

STATE OF NEW YORK
COUNTY OF _____

DECLARATION OF
RESTRICTIVE COVENANTS

THIS DECLARATION OF RESTRICTIVE COVENANTS is made this _____day of _____, 2010, by _____, ("Declarant"), A New York corporation with offices at _____, _____, New York.

RECITALS

WHEREAS, Declarant is the owner in fee of certain real property (*"real property" includes wetlands, any interest in submerged lands, uplands, associated riparian/littoral rights*) (the "Property") comprising _____acres ± and located in the Town of _____, _____County, New York. The Property is more particularly described as tax map ID number _____, and is indicated on a plat recorded with the _____County Clerk at Book ____, Page_____. The Declarant's deed to the Property is recorded at Book _____, page _____; and

WHEREAS, Declarant plans a development on the Property to be known as "_____", which includes discharge of dredged or fill material in a manner authorized by Department of the Army Permit ("DA Permit") number _____ issued on _____, 201__ by the United States Army Corps of Engineers, New York District ("Corps of Engineers", to include any successor agency) in accordance with the federal Clean Water Act, 33 U.S.C. § 1344; and

ALTERNATIVE CLAUSE FOR NATIONWIDE PERMIT

WHEREAS, Declarant plans a development on the Property to be known as "_____", which includes discharge of dredged or fill material in a manner authorized by Department of the Army Nationwide General Permit(s) Number _____ ("DA Permit") in accordance with the federal Clean Water Act, 33 U.S.C. § 1344, authorization number _____having been verified by letter issued on _____, 201___by the United States Army Corps of Engineers, New York District ("Corps of Engineers", to include any successor agency); and

WHEREAS, Declarant also seeks to develop the Property in a manner authorized by New York State Department of Environmental Conservation ("NYSDEC", to include any successor agency) Permit number _____ issued on _____, 200__ in accordance with _____ ("NYSDEC Permit"); and

WHEREAS, as a portion of the compensatory mitigation required by the DA Permit and the NYSDEC Permit; in recognition of the continuing benefit to the Property; and for the protection of waters of the United States and scenic, resource, environmental, and general property values; Declarant agrees to place certain Restrictive Covenants on the a portion of the property (the "Restricted Property"), in order that the Restricted Property shall remain substantially in its natural condition forever; and

WHEREAS, the Restricted Property comprises a total of _____acres of wetlands and adjacent uplands and is shown on the map entitled "_____ Map", dated _____ and filed with the plat described above; and

WHEREAS, a metes and bounds description of the Restricted Property is attached to this Declaration as Exhibit "A" and made a part hereof; and a reduced copy of the "_____Map" is attached to this Declaration as Exhibit "B" and made a part hereof.

NOW THEREFORE, for good and valuable consideration as set forth above, Declarant hereby declares that the Restricted Property shall be held, occupied, and used, and shall be transferred, conveyed, leased, or otherwise disposed of subject to the following Restrictive Covenants, which shall run with the land and be binding on all heirs, successors, assigns lessees, other occupiers and users (they are included in the term, "Declarant," below).

PROHIBITIONS

The Declarant shall ensure that these Prohibitions shall run with the Restricted Property in perpetuity, and be binding on the Declarant and its successors, assigns, lessees, and other occupiers and users. These Restrictive Covenants are subject to Declarant's reserved rights, which follow, and to the requirements of the DA and NYSDEC Permits.

1. **General.** There shall be no future filling, flooding, excavating, mining or drilling; no removal of natural materials; and no alteration of the topography which would materially affect the Restricted Property in any manner, except as authorized by the DA or NYSDEC Permit.

2. **Waters and Wetlands.** In addition to the general restrictions above, within the Restricted Property there shall be no draining, dredging, damming or impounding; no changing the grade or elevation, impairing the flow or circulation of waters, or reducing the reach of waters; and no other discharges or activity requiring a permit under applicable water pollution control laws or regulations, except as authorized by the DA or NYSDEC Permit.

3. **Trees/Vegetation.** On the Restricted Property there shall be no clearing, burning, cutting or destroying of trees or vegetation, except removal or trimming of vegetation hazardous to person or property, or of timber downed or damaged due to natural disaster, or as authorized by the DA or NYSDEC Permit. There shall be no planting or introduction of non-native or exotic species of trees or other vegetation.

4. **Disposal:** There shall be no dumping of trash, waste, garbage or toxic, unsightly, hazardous or offensive material on the Restricted Property.

5. **Uses.** No agricultural, animal husbandry, industrial, mining, logging or commercial activity shall be undertaken or allowed on the Restricted Property.

6. **Structures/Utilities.** There shall be no construction, erection, or placement of buildings, billboards, utilities components or any other structures, to include trailers, mobile homes or recreational vehicles, telecommunications towers or antennas, on the Restricted Property.

7. **Roads.** There shall be no construction of roads, trails or walkways on the Restricted Property.

8. **Pest Control.** There shall be no application of pesticides or herbicides to control vegetation on the Restricted Property, without prior written approval of the Corps of Engineers or NYSDEC.

9. **Vehicle Use.** There shall be no driving or use of any mechanical conveyance which may alter or impair the natural contour of the Restricted Property or its natural vegetation, except that motor vehicles may be used in case of emergency, for law-enforcement purposes, or to perform mitigation activity as required by the DA or NYSDEC Permit.

10. **Other Prohibitions.** Any other use of, or activity on, the Restricted Property which is or may become inconsistent with the purposes of this Declaration, the preservation of the Restricted Property substantially in its natural condition, or the protection of its environmental systems, is prohibited.

GENERAL CONDITIONS

1. **Other Restrictions.** The Declarant represents and warrants that no restriction of record on the use of the Restricted Property, nor any presently existing future estate or interest in the Restricted Property, nor any lien, obligation, covenant, limitation, lease, mortgage or encumbrance of any kind precludes the imposition of the restrictions, covenants, obligations or agreements of this Declaration, or the maintenance of the Restricted Property in accordance herewith.

2. **Existing Conditions.** The Declarant represents and warrants that no structures of any kind, to include roads, trails or walkways, and that no violations of any these Restrictive Covenants exist on the Restricted Property at the time of execution of this Declaration.

3. **Reserved Rights**. The Restrictive Covenants set forth in this Declaration are created solely for the protection of the Restricted Property, and for the consideration and values set forth above, and Declarant reserves the ownership of the fee simple estate upon the Restricted Property and all rights appertaining thereto, including the right to engage in all acts or uses not prohibited by this Declaration and not inconsistent with the conservation purposes hereof. It is expressly understood and agreed that the terms of this Declaration do not grant or convey to members of the general public any rights of ownership, entry or use of the Restricted Property.

4. **Marking.** The Declarant shall mark the limits of the Restricted Property in a manner approved by the Corps of Engineers, and shall maintain the marking in place so as to notify the public that the Restricted Property is an area preserved for conservation purposes.

5. **Recording.** A plat depicting the boundaries of the Restricted Property is recorded with the _____County Clerk at Book _____, Page _____. The Declarant shall record this Declaration in the records of the _____County Clerk, shall insure that this Declaration is indexed against the Restricted Property, and shall provide the Corps of Engineers with a copy of this Declaration, as filed, within 30 days of execution hereof.

6. **Compliance Inspections**. The Corps of Engineers, NYSDEC and their authorized agents shall have the right to enter and go upon the lands of Declarant to inspect the Restricted Property and take actions necessary to verify compliance with the Restrictive Covenants set forth in this Declaration.

7. **Enforcement**. The Declarant grants to the Corps of Engineers, the U.S. Department of Justice and NYSDEC a discretionary right to enforce the Restrictive Covenants set forth in this Declaration in a judicial action against any person or other entity violating or attempting to violate these Restrictive Covenants; provided, however, that no violation of these Restrictive Covenants shall result in a forfeiture or reversion of title. In any enforcement action, an enforcing agency shall be entitled to a complete restoration for any violation, as well as any other judicial remedy such as civil or criminal penalties or an award of agency attorneys' fees. Nothing herein shall limit the right of the Corps of Engineers or NYSDEC to modify, suspend or revoke their respective Permits.

8. **Notice to Government**. Any permit application or request made to any governmental entity and affecting the Restricted Property shall expressly reference and include a copy (with the recording stamp) of this Declaration.

9. **Property Transfers**. Declarant shall include the following notice on all deeds, mortgages, plats, or any other legal instruments used to convey any interest in the Property (failure to comply with this paragraph does not impair the validity or enforceability of these Restrictive Covenants):

> NOTICE: This Property is Subject to Declaration of Restrictive Covenants
> Recorded at [*insert book and page references, county(ies), and date of recording*].

At least 30 days prior to conveyance of any interest in the Restricted Property, Declarant (to include any successor Declarant) shall notify the Corps of Engineers and NYSDEC of such intended conveyance, providing the full names and mailing addresses of all Grantees.

10. **Amendment**. This Declaration may only be amended by a recorded document signed by the Declarant after written approval by the Corps of Engineers and NYSDEC. Any amendment shall be consistent with the Corps of Engineers' model conservation restrictions at the time of amendment. Amendment shall be allowed at the discretion of the Corps of Engineers and NYSDEC, in consultation with resource agencies as appropriate, and then only in exceptional circumstances. Mitigation for amendment impacts will be required pursuant to Corps of Engineers and NYSDEC mitigation policy at the time of amendment. There shall be no obligation to allow an amendment.

11. **Severability Provision**. Should any separable part of these Restrictive Covenants be held contrary to law, the remainder shall continue in full force and effect.

IN WITNESS WHEREOF, the Declarant has duly executed this Declaration of Restrictive Covenants on the date written above.

IN THE PRESENCE OF: _____, Declarant

_____ By: _____

Printed Name: _____ Printed Name: _____

Title: _____

STATE OF NEW YORK)
) ss.:
COUNTY OF _____)

On this ____ day of _____ in the year _____, before me personally appeared _____personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed in the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
NOTARY PUBLIC
STATE OF NEW YORK

Draft Wetland Mitigation and Monitoring Plan

APPENDIX C

Mitigation Area Wetland Delineation Report

Wetland Delineation Report

RMU-2 Landfill Expansion
Proposed Wetland Mitigation Area
Town of Porter, Niagara County, New York

Prepared for:

CWM Chemical Services
1550 Balmer Road
Model City, New York 14107

Prepared by:

edr Companies
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June 2012

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1.0 INTRODUCTION

1.1 Project Site Description

At the request of CWM Chemical Services, LLC (CWM), edr Companies (edr) investigated approximately 21 acres of land located in the Town of Porter, Niagara County, New York (Figure 1). The land (hereafter referred to as the Project site) is located at CWM's Model City facility off of Balmer Road, and is proposed for development of a compensatory wetland mitigation area. The Project site is currently dominated by successional deciduous forest, but also includes areas of disturbed land, successional old field, and wetland communities. The Project site is located immediately west of FAC ponds 1 and 2 in the western portion of CWM's Model City property (Figure 2).

1.2 Purpose

The purpose of this study was to delineate and describe all on-site wetlands and other waters that may fall under state or federal jurisdiction. Specific tasks included 1) review of background resource data/mapping, 2) field delineation and flagging of all potential state and federal jurisdictional wetlands and streams, 3) survey of jurisdictional area boundaries using a global positioning system (GPS) with reported sub-meter accuracy, 4) quantification of the area of on-site wetlands/waters, and 5) a detailed description of these potential jurisdictional areas based on hydrology, vegetation, and soils data collected in the field.

This report describes the results of the on-site wetland delineation conducted by edr, including a description of the wetlands and other waters that were identified and their likely jurisdictional status. This document is intended to provide all of the information necessary to identify on-site jurisdictional areas and support a permit application to the United States Army Corps of Engineers (USACOE) and the New York State Department of Environmental Conservation (NYSDEC).

1.3 Resources

Data and literature supporting this investigation have been obtained from a number of sources including United States Geological Survey (USGS) topographic mapping (Ransomville, NY 7.5 minute quadrangle), United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping, NYSDEC Freshwater Wetlands mapping, the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey of Niagara County, New York (1972), correspondence with the New York State Natural Heritage Program

(NHP), and recent (2008) natural color orthoimagery obtained from the NYS Geographic Information Systems (GIS) Clearinghouse.

Vascular plant names and wetland indicator status used in this report follow the National Wetland Plant List (Lichvar & Kartesz, 2009). Jurisdictional areas were characterized according to the wetlands and deepwater habitats classification system used in NWI mapping (Cowardin, 1979).

1.4 Qualifications

edr's Environmental Project Manager Jim Pippin and Senior Ecological Resource Specialist Sara Stebbins performed the on-site wetland delineation. John Hecklau served as the edr Principal-in-Charge on the project.

Mr. Hecklau serves as principal-in-charge on many of edr's environmental inventory, management, and permitting projects. He received a bachelor's degree in biology from Middlebury College and a master's degree in wildlife biology from State University of New York (SUNY) College of Environmental Science and Forestry. With over 25 years of experience in the environmental field, professional expertise includes wetland delineations, plant and wildlife identification, community mapping, resource management planning, habitat assessments, and environmental impact analysis.

Mr. Pippin is an Environmental Project Manager/Environmental Scientist with over 15 years of experience in the environmental field. He received a bachelor's degree in Natural Resources Management from the University of Maryland at College Park. Professional expertise includes State Environmental Quality Review Act (SEQRA) compliance, local, state, and federal permitting, wetland delineations, wetland mitigation monitoring, stream restoration and monitoring, forest conservation management, global positioning system (GPS) mapping, and geographic information system (GIS) data analysis.

Ms. Stebbins is a plant ecologist with over 10 years of applicable environmental experience, and holds both Bachelor's and Master's degrees from SUNY College of Environmental Science and Forestry. Since joining edr, Ms. Stebbins has been involved in a wide variety of projects, with field tasks including rare plant surveys, ecological community inventory and mapping, wetland delineations, habitat assessments, and invasive species surveys. As a skilled technical writer, report writing tasks have included preparation of numerous environmental review and permitting documents, including environmental impact statements (SEQRA and NEPA), Biological Evaluations (NEPA), Siting Board Applications, and Conservation Analyses.

2.0 SITE PHYSICAL CHARACTERISTICS AND RESOURCES

2.1 Existing Vegetation

Existing ecological communities on the Project site were mapped based on interpretation of aerial photography, and then verified in the field by edr biologists on May 22, 2012. Following field reconnaissance and aerial photo review, vegetative community boundaries were digitized, and approximate acreages calculated through the use of GIS analysis. As shown in Figure 3, the site contains five broad ecological community types: upland deciduous forest (10.27 acres), disturbed/developed (4.95 acres), forested wetland (3.05 acres), emergent wetland (2.07 acres), and successional old-field (1.15 acres).

Upland deciduous forest is the dominant ecological community type on the Project site. This community comprises approximately 10.27 acres of the site, and is characterized by eastern cottonwood (*Populus deltoides*), black locust (*Robinia pseudoacacia*), red oak (*Quercus rubra*), and box elder (*Acer negundo*) in the overstory, with honeysuckle (*Lonicera morrowii*), black raspberry (*Rubus occidentalis*), and poison ivy (*Toxicodendron radicans*) in the understory. Portions of the upland deciduous forest on site were previously disturbed, as evidenced by piles of soil/excavated material among the trees.

Forested wetlands occupy approximately 3.05 acres of the site, and are dominated by black willow (*Salix nigra*), green ash (*Fraxinus pennsylvanica*), gray dogwood (*Cornus racemosa*), and various wetland grasses. This community is found along the eastern edge of the Project site and is surrounded by upland deciduous forest and developed access roads.

Emergent wetland occupies approximately 2.07 acres in the northern portion of the Project site and is characterized by sedges (*Carex* sp.), willowherbs (*Epilobium* sp.), and various wetland grasses. A few small green ash saplings are also present. This wetland is a stormwater management pond with soils comprised of excavated clay.

Successional old field occupies approximately 1.15 acres of the site and is dominated by herbaceous species including goldenrod (*Solidago* sp.), common milkweed (*Asclepias syriaca*), wild strawberry (*Fragaria virginiana*), crown vetch (*Coronilla varia*), and various grasses. Eastern red cedar (*Juniperus virginiana*) shrubs are scattered throughout. This community occurs along the northern edge of the site, on previously disturbed areas that are in the early stages of secondary succession.

The remainder of the site (approximately 4.95 acres) is characterized as disturbed/developed, and includes areas that generally lack vegetation, including disturbed soils, gravel access roads, and a dry drainage ditch (described below as delineated Wetland C).

2.2 Physiography and Soils

The Project site is located within the Erie-Ontario Plain physiographic province of New York, which in this region extends from the shore of Lake Ontario to the foot of the Niagara Escarpment. Elevation of this province within Niagara County ranges from 250 feet above mean sea level (amsl) along the lakeshore to 390 feet amsl at the base of the Niagara Escarpment in the Town of Lewiston, New York (NRCS, 1972). Topography is generally level throughout the Project site and surrounding area, ranging from 304 to 320 feet amsl (Figure 4).

Based on available soils mapping for Niagara County (NRCS, 1972), the majority of the site is underlain by soils mapped as "Made land" (see Figure 5). This soil type occurs on approximately 94 percent of the Project site, and is described by the County Soils Survey as areas filled with stones, old masonry materials, brick, and other waste covered with a thin mantle of soil material. A small area of Rhinebeck silt loam soil is also mapped as occurring on site. Both the Rhinebeck silt loam and Made land mapping units are classified as hydric (NRCS, 2012a). Table 1 presents detailed information on all of the soils found on-site.

Table 1. On-Site Soils

Soils Name[1]	Mapping Unit	Slope (%)	Drainage [2]	Depth to Seasonal High Water Table (in)	Hydric Soil [3]
Made land	Me	0-2	vpd	0-6	Yes
Rhinebeck silt loam	RbA	0-2	spd	6-12	Yes

[1] Unless otherwise noted, information derived from the Soil Survey of Niagara County, New York (1972).
[2] Soil drainage is represented by the following abbreviations: "ed" = excessively drained, "sed" = somewhat excessively drained, "wd" = well drained, "mwd" = moderately well drained, "spd" = somewhat poorly drained, and "vpd" = very poorly drained.
[3] NRCS, 2012a.

2.3 Hydrology

The Project site is located in the Great Lakes Drainage Basin and is part of USGS Hydrologic Unit 04130001 of the Oak Orchard-Twelvemile Watershed. In Niagara County, total annual precipitation averages 37 inches (NRCS, 2012b). The majority of surface hydrology on the Project site is generated by precipitation and surface water run-off from adjacent land. A series of ditches drain the Model City facility, connecting delineated wetlands to other off-site

hydrological features, and ultimately draining into Fourmile Creek. USGS topographic mapping does not indicate the presence of any ponds in the Project site (Figure 4). One stream/ditch is depicted running east-west across the northern end of the Project site; this feature was delineated as Wetland B. Field review also revealed the presence of a drainage ditch on the southeastern side of the access road running through the center of the Project site, which was delineated as Wetland C.

3.0 JURISDICTIONAL AREA MAPPING

3.1 Waters of the United States

As defined by the USACOE, Waters of the United States include all lakes, ponds, streams (intermittent and perennial), and wetlands. Jurisdictional wetlands are defined as "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (EPA, 2001). Such areas are indicated by the presence of three criteria: hydrophytic vegetation, hydric soils, and evidence of wetland hydrology during the growing season (Environmental Laboratory, 1987). However, as a result of the Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers Supreme Court case (No. 99-1178; January 9, 2001), it has been determined that the USACOE does not have jurisdictional authority over waters that are "nonnavigable, isolated, and intrastate" (EPA, 2001). Subsequent Supreme Court rulings have indicated that jurisdictional waters include headwaters and wetlands that have a "significant nexus" to navigable or interstate waterways. The USACOE offered a preliminary opinion during field review on May 22, 2012 that the delineated wetlands at the Project site will be considered jurisdictional. However, final jurisdictional status will be determined during the formal application review.

NWI maps indicate the approximate location of wetlands that could be under federal jurisdiction. NWI mapping does not indicate the presence of any federally mapped wetlands within the Project site (see Figure 6). However, there are numerous NWI wetlands mapped within the Model City facility. The closest, FAC ponds 1 and 2, is located approximately 35 feet east of the Project site. This wetland is a freshwater pond, coded by the NWI as PUBKHx (palustrine, unconsolidated bottom, artificially flooded, diked/impounded, excavated).

3.2 New York State Freshwater Wetlands

The Freshwater Wetlands Act (Article 24 and Title 23 of Article 71 of the Environmental Conservation Law) gives the NYSDEC jurisdiction over state-protected wetlands and adjacent areas (100-foot upland buffer). The Freshwater

Wetlands Act requires the NYSDEC to map all state-protected wetlands (typically over 12.4 acres in size) to allow landowners and other interested parties a means of determining where state jurisdictional wetlands exist. NYSDEC Freshwater Wetland mapping does not indicate the presence of any state mapped wetland within the Project site (see Figure 7). The nearest NYSDEC Freshwater Wetland, LE-18, is located approximately 0.2 mile west of the Project site.

3.3 Summary of On-Site Jurisdictional Areas

3.3.1 Wetlands

edr personnel delineated four wetlands totaling 5.16 acres within the Project site. Information pertaining to these wetlands is summarized in Table 2. Detailed descriptions of the delineated wetland are presented in Section 4.2. Additional information is provided on the data sheets included in Appendix B.

Table 2. On-Site Wetlands.

Wetland ID [1]	Area [2]	Federal Jurisdiction [3]	State Jurisdiction
A	3.05	Yes	No
B	0.25	Yes	No
C	0.04	Yes	No
D	1.82	Yes	No

[1]Delineated wetlands were identified with a unique letter by **edr** personnel during field investigations.
[2]Area is expressed in acres, and includes on-site portions of wetlands only.
[3]Based on field observations of hydrologic connections. Final jurisdiction will be determined during formal application review.

3.3.2 Streams and Ponds

There are no lakes or ponds within the Project site. There is one mapped stream/ditch depicted running east-west across the northern end of the Project site; this feature was delineated as Wetland B (see Figure 8). This ditch originates in Wetland D (a retention basin) and is characterized by well-defined, excavated banks and a slow, gentle flow (see additional discussion in Section 4.2). Field review also revealed the presence of a drainage ditch on the southeastern side of the access road running through the center of the Project site, which was delineated as Wetland C.

4.0 ON-SITE JURISDICTIONAL AREA DELINEATION

4.1 Methodology

The entire Project site was investigated, and all the wetlands were delineated on May 22, 2012. The determination of wetland boundaries was made by edr personnel according to the three-parameter methodology described in the *USACOE Wetland Delineation Manual* (Environmental Laboratory, 1987). Determination of wetland boundaries was also guided by the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeastern Region* (hereafter referred to as the Regional Supplement) (USACOE, 2009). Attention was also given to the identification of potential hydrologic connections between wetland areas that could influence their jurisdictional status. Wetland boundaries were defined in the field with sequentially numbered pink surveyor's flagging.

Data was collected from sample plots in each delineated wetland on May 22, 2012, and was recorded on USACOE *Routine Wetland Determination* forms (Appendix B). Data collected by edr personnel included dominant vegetation, hydrology indicators, and soil characteristics.

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

Soils data at each sampling location were collected by edr personnel using a trenching shovel. Information concerning soil name, drainage classification, texture, matrix and redoximorphic feature color was obtained by reviewing the County Soil Survey and through field sampling. Soil colors were determined using *Munsell Soil Charts* (Kollmorgen Corp., 2000). This information was used to determine whether the soils displayed hydric characteristics. Hydric soils are those that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil layer. Hydric soils are poorly drained, and their presence is indicative of the likely occurrence of wetlands (Environmental Laboratory, 1987).

The Regional Supplement lists the following indicators as evidence of wetland hydrology (in order of decreasing reliability): (A1) surface water, (A2) high water table, (A3) saturation, (B1) water marks, (B2) sediment deposits, (B3) drift deposits, (B4) algal mat or crust, (B5) iron deposits, (B7) inundation visible on aerial imagery, (B8) sparsely vegetated concave surface, (B9) water-stained leaves, (B13) aquatic fauna, (B15) marl deposits, (C1) hydrogen sulfide odor, (C3) oxidized rhizospheres on living roots, (C4) presence of reduced iron, (C6) recent iron reduction in tilled soils, and (C7) thick muck surface. Hydrologic characteristics (inundation and soil saturation) were visually assessed to a depth of 12 inches. The hydrology indicators described above are considered "primary indicators," and any one of these indicators is sufficient evidence that wetland hydrology is present. In addition, "secondary indicators" used by edr personnel included: (B6) surface soil cracks, (B10) drainage patterns, (B16) moss trim lines, (C2) dry-season water table, (C8) crayfish burrows, (C9) saturation visible on aerial imagery, (D1) saturation visible on aerial imagery, (D2) geomorphic position, (D3) shallow aquitard, (D4) microtopographic relief, and (D5) fac-neutral test. Any two of these also indicate the presence of wetland hydrology. Wetland hydrology, when combined with a hydrophytic plant community and hydric soils, indicate the presence of a wetland.

Photographs representative of the delineated wetland on-site are included in Appendix C.

4.2 Description of On-Site Delineated Wetlands

edr personnel delineated four wetlands on-site. The size and location of these wetlands are illustrated in Figure 8. A description of these wetlands is presented below.

Wetland A

Wetland A (3.05 acres) is a forested wetland located in the eastern portion of the Project site (Figure 8). Vegetation is dominated by green ash, black willow, gray dogwood, and various grasses and mosses. Evidence of hydric soils included low chroma matrix colors (2.5YR 3/1) with clay cobbles present throughout the pedon, and dark loamy soil over mottled clay (10YR 3/1 and 10YR 4/2). Evidence of wetland hydrology included inundation, water-stained leaves, oxidized rhizospheres on living roots, and moss trim lines. Hydrologic connectivity is present between this wetland and other wetlands both on- and off-site. Wetland A generally drains to the north into Wetland B, which flows off-site to the east. Wetland A is also connected to Wetland C, another drainage ditch that flows to the south.

Uplands adjacent to Wetland A are characterized as deciduous forest. Vegetation in this area includes cottonwood, box elder, black locust, honeysuckle, dame's rocket (*Hesperis matronalis*), and white avens (*Geum canadense*).

There was no evidence of wetland hydrology in these areas, and the bright soils (10YR 4/3) did not display any hydric soil characteristics.

Wetland B

Wetland B (0.25 acre) is located in the northeastern portion of the Project site (Figure 8). The wetland is a man-made drainage channel that runs parallel to an access road, but is presently overgrown and has the characteristics of an emergent wetland community. Vegetation is dominated by wetland species including cattails (*Typha angustifolia*), sedges, and a small amount of black willow. Evidence of hydric soils included a low chroma matrix (10YR 4/1) with a clay texture. Evidence of wetland hydrology included saturation, water-stained leaves, and the presence of a hydrogen sulfide odor. This wetland flows from west to east, receiving drainage from Wetland D via a culvert under a road separating the two wetlands, and flowing off-site to the east.

Uplands to the north of Wetland B are characteristic of an old field community, while the adjacent community to the south is upland deciduous forest (as described above). Dominant vegetation found at the sample point include goldenrod crown vetch, common milkweed, and wild strawberry. There was no evidence of wetland hydrology in this area and the bright soils (10YR 5/3) along with the hard packed rock/soil did not display hydric characteristics.

Wetland C

Wetland C (0.04 acre) is a drainage ditch that runs through the middle of the southern portion of the site, parallel to an access road (Figure 8). Stream flow appears ephemeral, with no water present during the field investigation. The channel has well defined banks and a vegetated channel. Bank width is approximately 10 feet, with a stream width of approximately 3 feet. Wetland C is connected to Delineated Wetland A and flows south into an east to west aligned drainage ditch that flows to a ditch called the ”Central Ditch”, which ultimately flows north into Fourmile Creek. Uplands adjacent to Wetland C consist of deciduous forest (described above) to the east and an access road to the west.

Wetland D

Wetland D (1.82 acres) is located in the northwestern corner of the site (Figure 8), and is the basin of a storm water retention pond. At the time of the investigation, the basin lacked standing water, and was vegetated with a wet meadow or emergent wetland community. Dominant species include wetland sedges and grasses, with scattered willowherb, water plantain (*Alisma* sp.), and green ash seedlings. Evidence of hydric soils included low chroma clay soils (10YR 4/2). Hydrologic indicators at the time of investigation included water-stained leaves and oxidized rhizospheres on living roots. Wetland D drains to the east via Wetland B.

Uplands adjacent to the Wetland D sample point are characteristic of a disturbed old field community, and are dominated by crown vetch (*Coronilla varia*). There is no evidence of wetland hydrology in the area and the high chroma soils (10YR 4/4) do not support the presence of a wetland. The soils are also generally disturbed and hard-packed clay/rock.

5.0 THREATENED AND ENDANGERED SPECIES

A letter request was sent to the New York Natural Heritage Program (NHP) on May 16, 2012 to determine whether any listed endangered or threatened species have been documented within or adjacent to the Project site. edr received a response from the NHP on June __, 2012. The response indicated that no state or federally-listed threatened or endangered species have been documented on or near the Project site.

6.0 CONCLUSIONS

edr delineated four wetlands within the Project site, totaling approximately 5.16 acres. The delineated wetlands were identified based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. The delineated area includes forested and emergent cover types. The primary functions provided by these wetlands appear to include storm water detention, ground water recharge, water quality improvement, and provision of wildlife habitat. The functions provided by the on-site wetlands are limited due to their shallow depth, ephemeral nature, and lack of habitat diversity. Because these wetlands are located on the site of an active hazardous waste landfill, they offer no opportunities for public recreational use, education, or research.

Wetlands on site do not correspond to areas where wetlands are shown on the NWI maps. However, they display wetland characteristics (vegetation, soils and hydrology) and therefore, pursuant to the provisions of the Clean Water Act, could be under the jurisdiction of the USACOE. All four wetlands delineated at the Project site are connected to off-site wetlands and appear to be jurisdictional. The USACOE gave preliminary consensus that the delineated wetlands would be jurisdictional during field review on May 22, 2012. However, final jurisdictional status will be determined during the formal application review.

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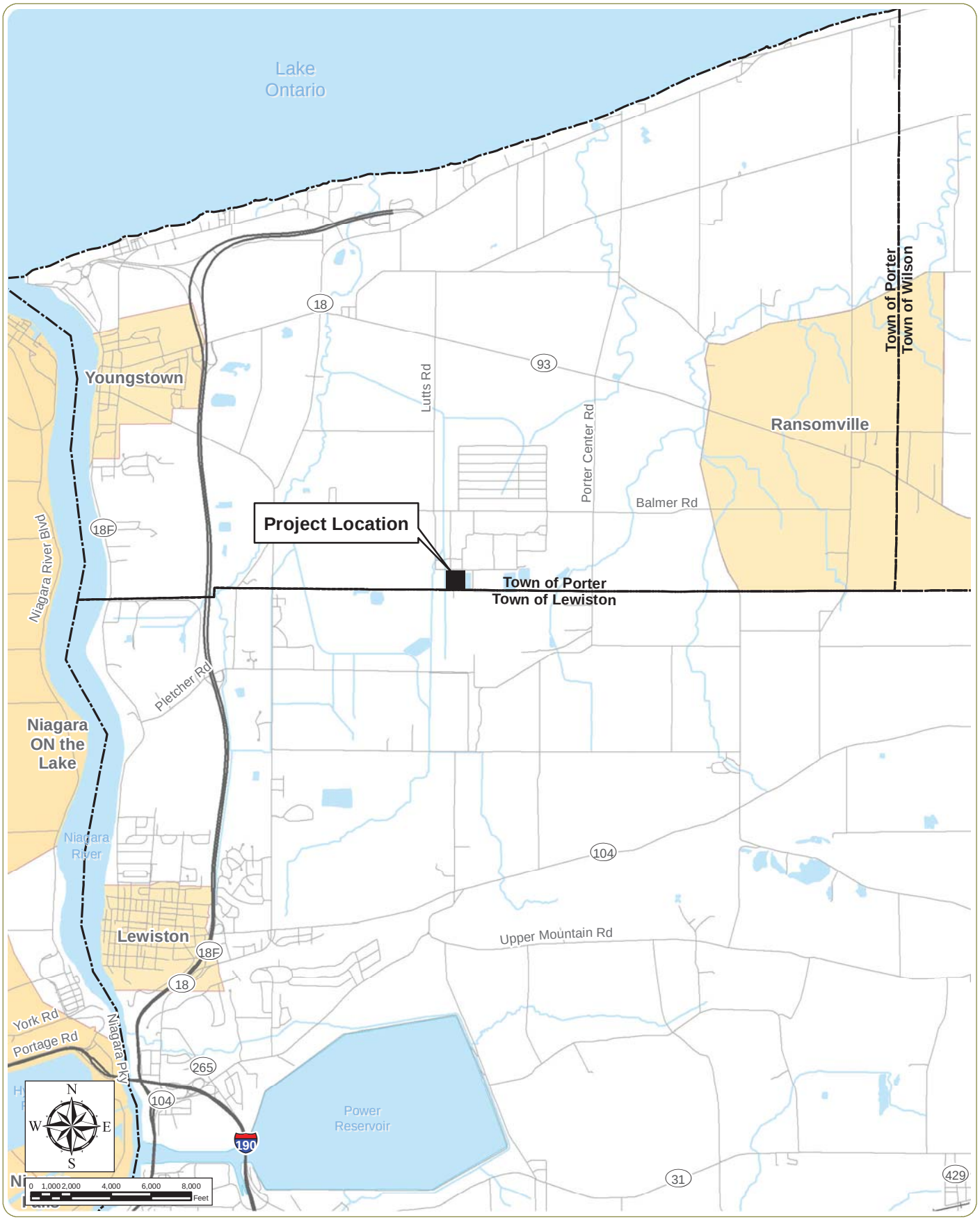
APPENDICES

Appendix A - Figures

Appendix B – Routine Wetland Determination Forms

Appendix C – Photo Documentation



CWM Model City Facility

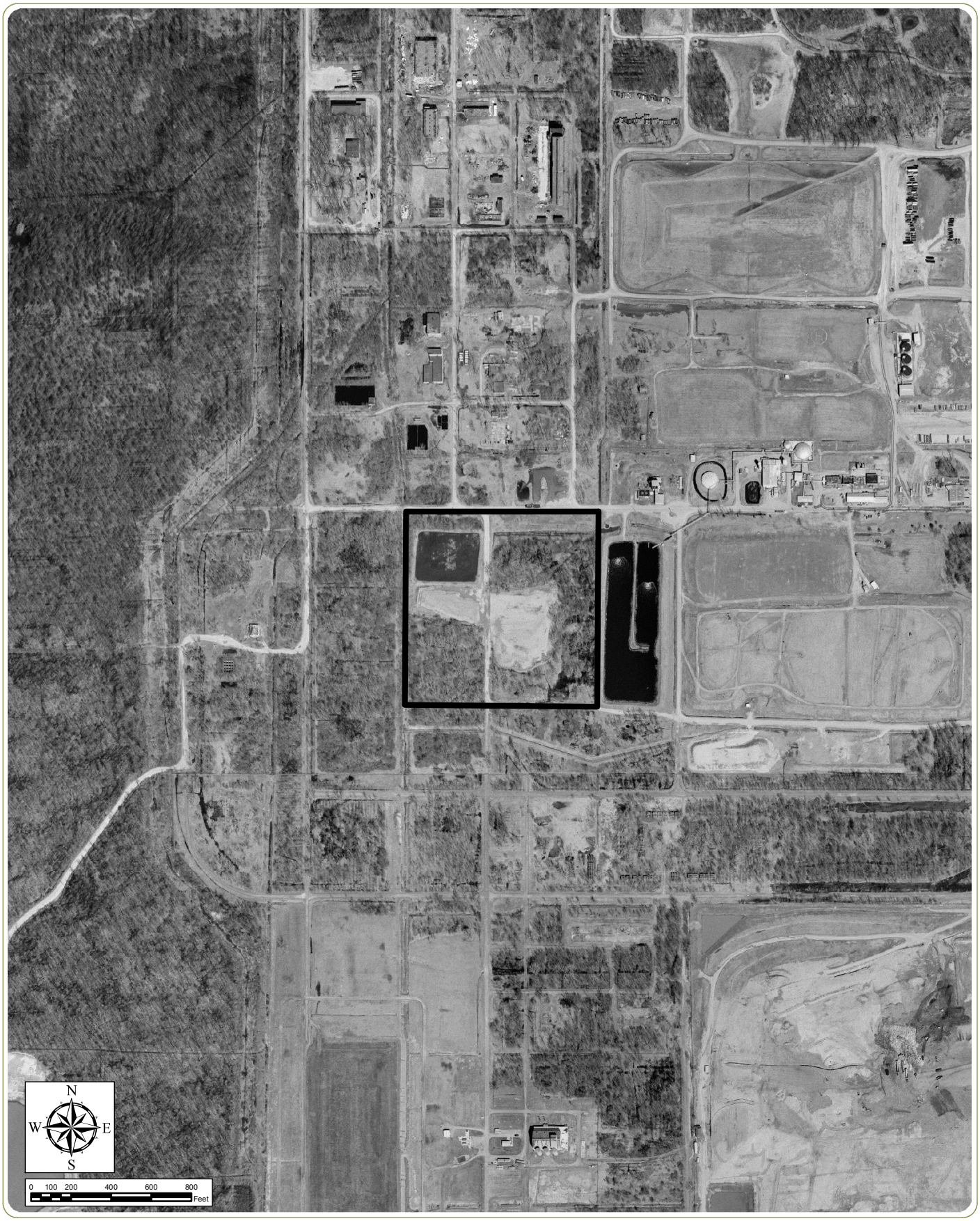
Wetland Delineation - Proposed Mitigation Area
Town of Porter, Niagara County

Figure 1: Regional Site Location

June 2012

Notes: Base Map: ESRI StreetMap North America, 2008.

edr COMPANIES
www.edrcompanies.com



CWM Model City Facility

Wetland Delineation - Proposed Mitigation Area
Town of Porter, Niagara County

Figure 2: Project Site

June 2012
Notes: Base Map: USGS 2-Foot Orthoimagery, 2008.

Project Site

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CWM Model City Facility

Wetland Delineation - Proposed Mitigation Area
Town of Porter, Niagara County

Figure 3: On-Site Ecological Communites

June 2012

Notes: Base Map: USGS 2-Foot Orthoimagery 2008.

Project Site
Forested Wetlands
Emergent Wetlands
Disturbed
Old Field
Forested Upland

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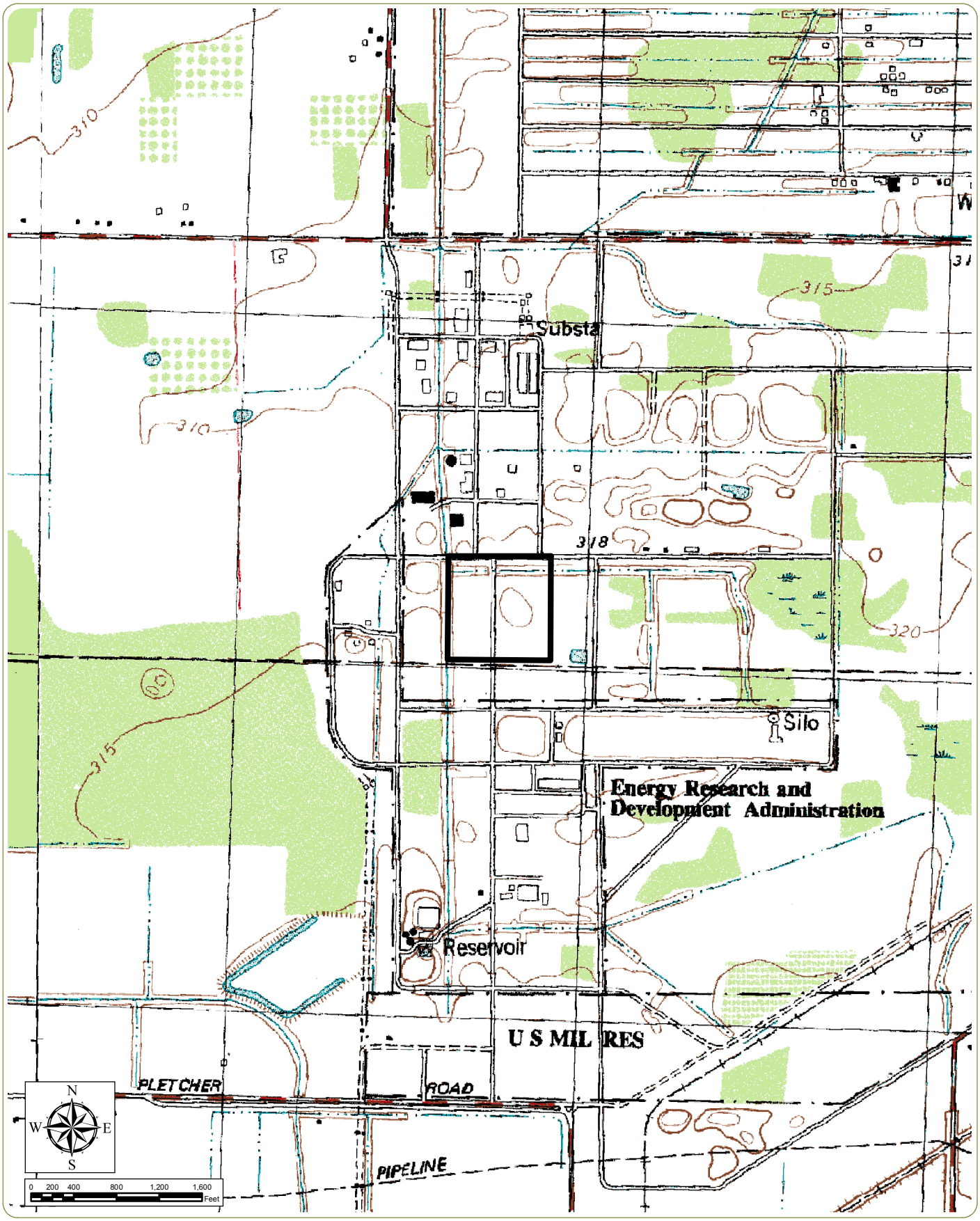

CWM Model City Facility

Wetland Delineation - Proposed Mitigation Area
Town of Porter, Niagara County

Figure 4: USGS Topographic Mapping

June 2012

Notes: Base Map: USGS 1:24,000 Ransomville Quadrangle.

Project Site

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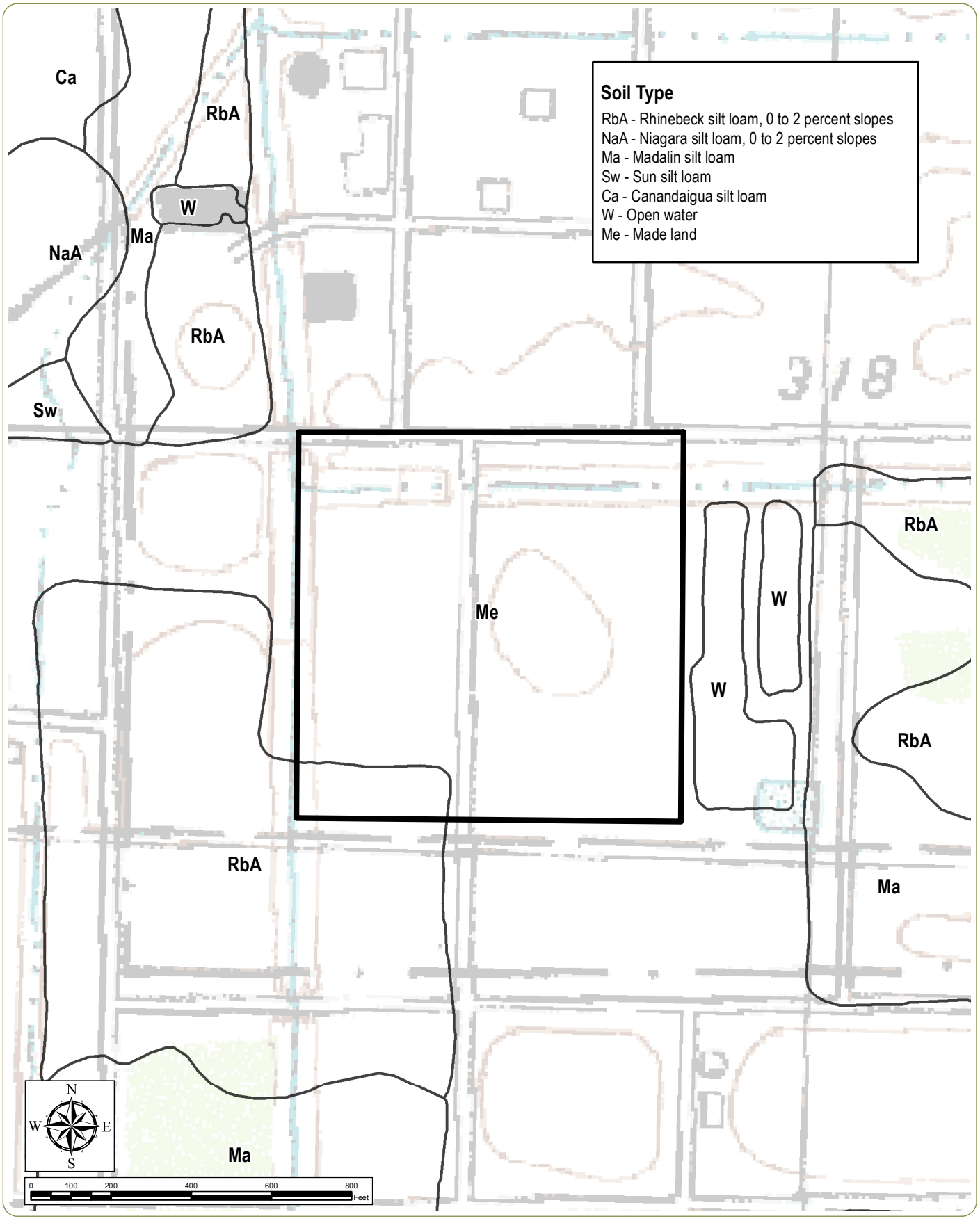

CWM Model City Facility

Wetland Delineation - Proposed Mitigation Area
Town of Porter, Niagara County

Figure 5: On-Site Soils
June 2012

Notes: Base Map: USGS 1:24,000 Ransomville Quadrangle.
Source: NRCS Soil Survey Geographic Database - Niagara County

Project Site
Soil Map Unit Boundary

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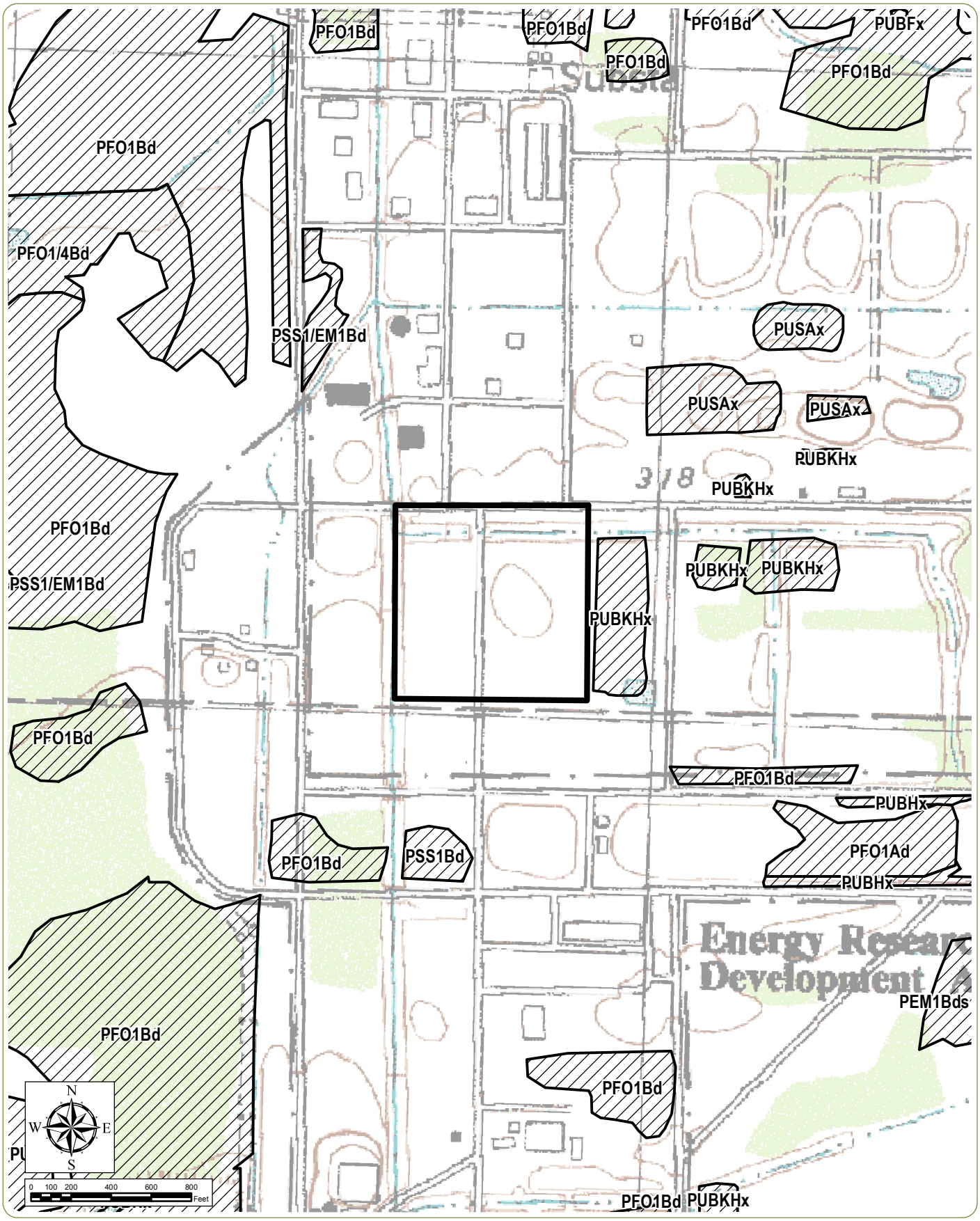

CWM Model City Facility

Wetland Delineation - Proposed Mitigation Area
Town of Porter, Niagara County

Figure 6: NWI Wetlands

June 2012

Notes: Base Map: USGS 1:24,000 Ransomville Quadrangle.
Source: National Wetland Inventory Map - Ransomville Quadrangle

Project Site
NWI Wetland

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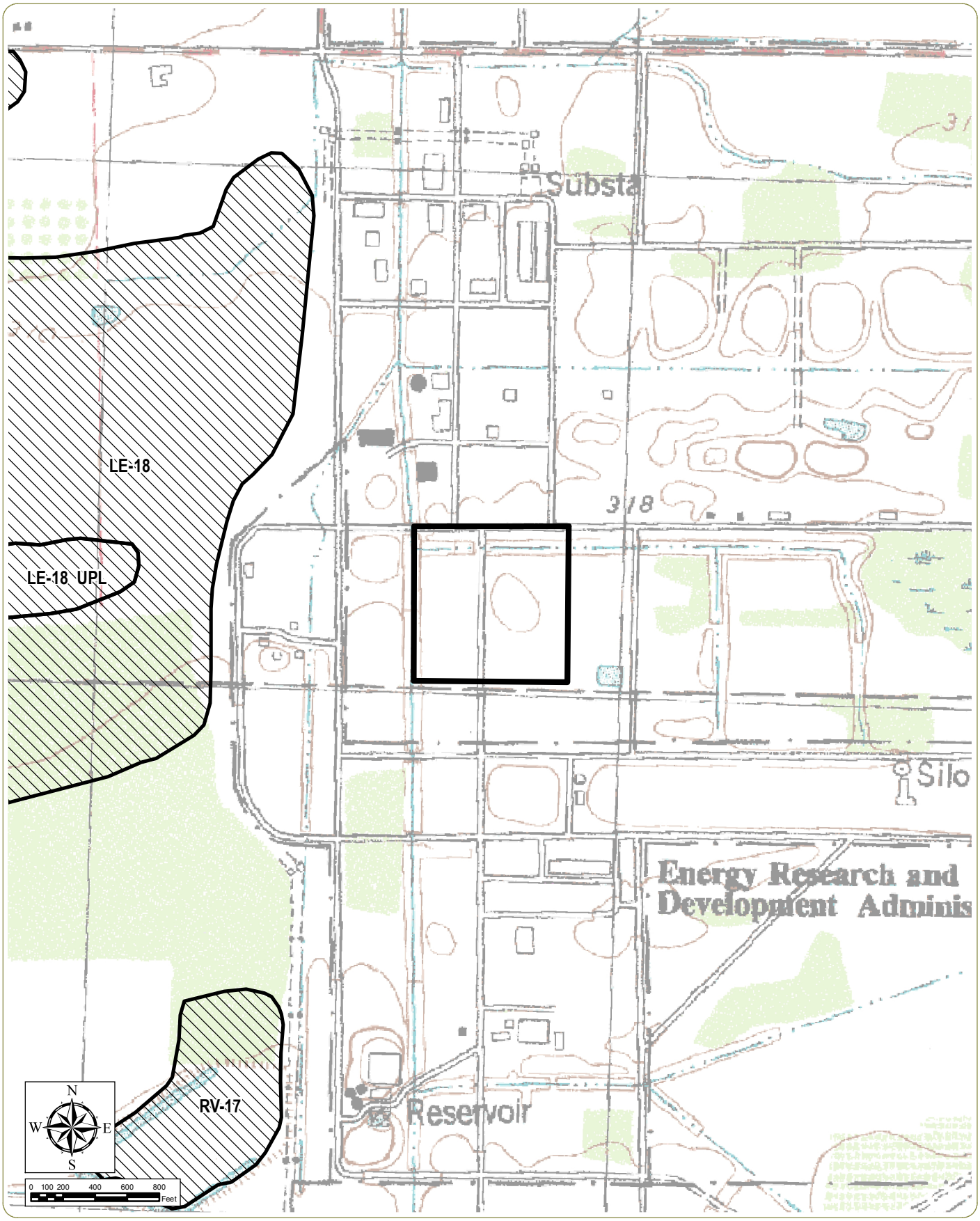

CWM Model City Facility

Wetland Delineation - Proposed Mitigation Area
Town of Porter, Niagara County

Figure 7: NYS DEC Freshwater Wetlands
June 2012

Notes: Base Map: USGS 1:24,000 Ransomville Quadrangle.
Source: NYS DEC Freshwater Wetland Map - Niagara County

NYSDEC Wetland
Project Site

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Wetland Delineation - Proposed Mitigation Area
Town of Porter, Niagara County

Figure 8: Delineated Wetlands

June 2012

Notes: Base Map: USGS 2-Foot Orthoimagery, 2008.

Project Site

Delineated Wetland

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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 (Model City) Sampling Date: 5/22/2012
County: Niagara
Applicant: CWM Chemical Services, LLC State: New York Community: PEM
Data Point ID (i.e. 2W@Wet. G): 1W@WetA Nearest Flag to Data Point: A-47

Investigator(s) Pippin/Stebbins

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)
- X 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)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X 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)
- X 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 X
Saturated Conditions? Yes X No ___
→ Inundated further into wetland

Depth of Water (inches): ___
Depth to Sat. Soil (inches): yes
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:

Remarks

Project Number: 09022
Applicant: CWM Chemical Services, LLC

Sampling Date: 5/22/2012
Data Point ID: 1 WC Wet A

Vegetation

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix sp. black willow	70	Y	
2. Frax penn	10	N	
3.			
4.			
5			
	80 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Cornus race	50	Y	
2. Frax penn	10	N	
3.			
4.			
5			
	60 = Total Cover		

Herb Stratum (Plot size: 5-foot radius)			
1. Phragmites	70	Y	
2. moss	80	Y	
3. glyceria			
4.			
5			
6.			
7.			
8.			
9.			
10.			
	150 = Total Cover		

Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
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: 4 (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: 5/22/2012

Applicant: CWM Chemical Services, LLC Data Point ID: DP@Wetland A Flag A-47

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
0-16+	2.5Y 3/1		—	—	—	—	Clay Loam

[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

Saturated soils low chroma with clay
Cobbles present throughout pedon.
See photo

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 _____
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 (Model City) Sampling Date: 5/22/2012
County: Niagara
Applicant: CWM Chemical Services, LLC State: New York Community: Succ. forest
Data Point ID (i.e. 2W@Wet. G): 1U@wetA Nearest Flag to Data Point: A-47

Investigator(s) Pippin/Stebbins

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 X
Saturated Conditions? Yes ____ No X

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:

Remarks

No hydric indicators

Project Number: 09022

Applicant: CWM Chemical Services, LLC

Sampling Date: 5/22/2012

Data Point ID: 1U @ wet A

Vegetation

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Robinia p-a	40		
2. Populus delt.	15		
3.			
4.			
5			
	55 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Lonicera morr	40		
2. Rubus occi	10		
3.			
4.			
5			
	50 = Total Cover		

Herb Stratum (Plot size: 5-foot radius)			
1. Hesperis matron	30		
2. Arctium	30		
3. Solidago	60		
4.			
5			
6.			
7.			
8.			
9.			
10.			
	120 = Total Cover		

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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

No hydrophytic vegetation

Project Number: 09022 Sampling Date: 5/22/2012

Applicant: CWM Chemical Services, LLC Data Point ID: DP@ wetland at flag A-47

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
0-6+	10YR 4/3		—	—	\	—	Clay loam

[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

Bright soils, cobble layer throughout, no hydric soil characteristics observed.

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 _____
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 (Model City) Sampling Date: 5/22/2012

County: Niagara

Applicant: CWM Chemical Services, LLC State: New York Community: ~~PEM~~ PFO

Data Point ID (i.e. 2W@Wet. G): 2W @ Wet A Nearest Flag to Data Point: A-11

Investigator(s) Pippin/Stebbins

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)
X 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)
X 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 X
Saturated Conditions? Yes X No ___

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

Remarks

Project Number: 09022
Applicant: CWM Chemical Services, LLC

Sampling Date: 5/22/2012
Data Point ID: L W @ wet A

Vegetation

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Frax penn	40		
2.			
3.			
4.			
5			
	40 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Cornus race	25		
2. Ulmus am	5		
3. Frax penn	25		
4.			
5			
	55 = Total Cover		

Herb Stratum (Plot size: 5-foot radius)			
1. Glyceria	50		
2. Carex	20		
3.			
4.			
5			
6.			
7.			
8.			
9.			
10.			
	70 = Total Cover		

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

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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: 5/22/2012

Applicant: CWM Chemical Services, LLC Data Point ID: DW@ wetland A

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)	Redox Features Frequency[1]	Redox Features Type[2]	Redox Features Loc[3]	Texture, Structure, Other
0-6"	10YR 3/1		—	—	—	—	Silt loam
6"+	10YR 4/2		7.5YR 4/3	F	RM	M	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

Dark loamy soil over mottled clay.
Saturated at surface.

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 _____
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 (Model City) Sampling Date: 5/22/2012
County: Niagara
Applicant: CWM Chemical Services, LLC State: New York Community: forested
Data Point ID (i.e. 2W@Wet. G): 24 @ wet A Nearest Flag to Data Point: A-11

Investigator(s) Pippin/Stebbins

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): _____
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:

Remarks
no hydrological indicators

Project Number: 09022 Sampling Date: 5/22/2012

Applicant: CWM Chemical Services, LLC Data Point ID: 2U @ wet A

Vegetation

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	50		
2. Robinia p-a	50		
3.			
4.			
5			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Lonicera morrowii	20		
2.			
3.			
4.			
5			
	= Total Cover		

Herb Stratum (Plot size: 5-foot radius)			
1. Antrum	15		
2. Hesperis matronalis	30		
3. Geum canadense	20		
4.			
5			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		

Woody Vine Stratum (Plot size: 30-foot radius)			
1. Toxicodendron rad	25		
2.			
3.			
4.			
5			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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

no hydrophytic vegetation

Project Number: 09022 Sampling Date: 5/22/2012

Applicant: CWM Chemical Services, LLC Data Point ID: 2nd wetland A

Flag A-11

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
0-6+	10YR 5/4		—	—	—	—	silt loam

[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

Bright soils associated with fill area adjacent to PFO wetland, No hydrology / hydric soils observed.

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)

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

If yes, indicate classification _____
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 (Model City) Sampling Date: 5/22/2012
County: Niagara
Applicant: CWM Chemical Services, LLC State: New York Community: Ditch / Stream PEM
Data Point ID (i.e. 2W@Wet. G): 1W@wetB Nearest Flag to Data Point: B-13

Investigator(s) Pippin/Stebbins

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)
X 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)
X Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
X 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 X
Saturated Conditions? Yes X No ____

Depth of Water (inches): _____
Depth to Sat. Soil (inches): 0
Depth to Water (inches): 4"

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:

Remarks

Project Number: 09022 Sampling Date: 5/22/2012

Applicant: CWM Chemical Services, LLC Data Point ID: 1 W(a, wet B

Vegetation

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix	20		
2.			
3.			
4.			
5			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Frax penn	10		
2.			
3.			
4.			
5			
	= Total Cover		

Herb Stratum (Plot size: 5-foot radius)			
1. Typha angust	70		
2. Carex	30		
3.			
4.			
5			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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: 5/22/2012

Applicant: CWM Chemical Services, LLC Data Point ID: Wetland B

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
0-16+	10YR4/1		~	~	~	~	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

Black organic streaking present No mottles except Oxidizing Rhizospheres. Soil sample taken at edge of man made drainage channel - to ~~it~~ mile creek.

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 _____
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 (Model City) Sampling Date: 5/22/2012
County: Niagara
Applicant: CWM Chemical Services, LLC State: New York Community: old field
Data Point ID (i.e. 2W@Wet. G): 1 u @ wet B Nearest Flag to Data Point: B-13

Investigator(s) Pippin/Stebbins

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 X
Saturated Conditions? Yes ____ No X

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:

Remarks

no hydrological indicators

Project Number: 09022

Applicant: CWM Chemical Services, LLC

Sampling Date: 5/22/2012

Data Point ID: 1W @ wet B

Vegetation

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

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

Herb Stratum (Plot size: 5-foot radius)			
1. Coronilla varia	40		
2. Fragaria virg	30		
3. Asclepias syr	10		
4. Solidago	40		
5 Daucus	5		
6.			
7.			
8.			
9.			
10.			
	= Total Cover		

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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

no hydrophytic veg

Project Number: 09022 Sampling Date: 5/22/2012

Applicant: CWM Chemical Services, LLC Data Point ID: 1U@ Wetland B

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"	10YR 5/3		—	—	—	—	Clay / Silt
3"+	Hard packed Rock/Soil.						

[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

Soil Sample is located on top of unconsolidated fill adjacent to wetland B. Soils are bright. After 3" unable to penetrate due to hard packed rock/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)
Is the wetland a mapped state wetland? Yes (No)

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

Stream Inventory Data Form

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Syracuse, New York 13202

274 North Goodman Street
Rochester, New York 14607

Observer:
Name: Pippin/Stebbins
Weather: hot, sunny

Project Information:
Name: CMW
Number: 09022 Date: 5/22/12

Stream Name: Unnamed Ditch (C)

Regukation Status:
State Protected? N
Corps Jurisdictional? ~~N~~ Y

Stream Location (nearest road, structure, etc.) :

Adjacent Community: forest (locust/cottonwood), adjacent road

Stream Gradient:
gentle X
moderate
steep

Stream Morphology:
bank width 10'
stream width 3'
water depth 2"
bankfull width 6"

Channel Substrate:
bed rock
boulder
cobble
gravel
sand
silt X
clay X

Instream Conditions:
obscurred bank
well defined bank X
eroded/undercut bank
overhanging vegetation
vegetated channel X
logs/woody debris
riffles and runs
deep pools
other

Stream Flow:
permanent
intermittent
ephemeral X

Photo #s
Flag #'s C-3

Additional Comments:
Drainage flows south Essentially into central ditch which ultimately flows to 4 mile creek.

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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 (Model City) Sampling Date: 5/22/2012
County: Niagara
Applicant: CWM Chemical Services, LLC State: New York Community: PEM (Stormwater)
Data Point ID (i.e. 2W@Wet. G): 1W@WetP Nearest Flag to Data Point: N/A take on Southern edge.

Investigator(s) Pippin/Stebbins

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)
X Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
X 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): 7 1/2"
Depth to Water (inches): 7 1/2"

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:

Remarks Basin of stormwater retention pond.

Project Number: 09022

Applicant: CWM Chemical Services, LLC

Sampling Date: 5/22/2012

Data Point ID: 1 W D wet D

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. Frax penn	20		
2.			
3.			
4.			
5			
	= Total Cover		
Herb Stratum (Plot size: 5-foot radius)			
1. Carex	80		
2. Impatiens	20		
3. Water plantain	5		
4. Lotus corn	20		
5			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size: 30-foot radius)			
1.			
2.			
3.			
4.			
5			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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: 5/22/2012

Applicant: CWM Chemical Services, LLC Data Point ID: WP@ wetland D

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
0-16"	10YR 4/2		7.5YR 4/4	F	C	M	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 D is a stormwater management pond. Soils are excavated clay for liner of the swm pond

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 _____
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 (Model City) Sampling Date: 5/22/2012
County: Niagara
Applicant: CWM Chemical Services, LLC State: New York Community: old field / berm
Data Point ID (i.e. 2W@Wet. G): 1W@ wet D Nearest Flag to Data Point:

Investigator(s) Pippin/Stebbins

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:

Remarks

no hydrologic indicators

Project Number: 09022 Sampling Date: 5/22/2012

Applicant: CWM Chemical Services, LLC Data Point ID: 1 u @ wet D

Vegetation

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

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

Herb Stratum (Plot size: 5-foot radius)			
1. Coronilla varia	100		
2. Phragmites	20		
3. Cirsium canu	10		
4. Solidago	20		
5			
6.			
7.			
8.			
9.			
10.			
	150 = Total Cover		

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (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: 5/22/2012

Applicant: CWM Chemical Services, LLC Data Point ID: 1W@ Wetland D

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
0-6"	10YR 4/4		—	—	—	—	Clay / Silt
6"+	Hard packed rock						

[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

Point located on top of SWM Pond berm. Soils are disturbed and hard packed Clay / Rock.

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)

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

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

Photo 01

Wetland A Sampling Point 1 at Flag A-47

Photo 02

Soil Test Pit for Wetland A Sampling Point 1 at Flag A-47

Photo 03

Upland A Sampling Point 1 at Flag A-47

Photo 04

Soil Test Pit for Upland A Sampling Point 1 at Flag A-47

Photo 05

Wetland A Sampling Point 2 at Flag A-11

Photo 06

Soil Test Pit for Wetland A Sampling Point 2 at Flag A-11

Photo 07

Upland A Sampling Point 2 at Flag A-11

Photo 08

Soil Test Pit for Upland A Sampling Point 2 at Flag A-11

Photo 09

Wetland A at Flag A-56 - View East

Photo 10

Wetland A at Flag A-79 - View East

Photo 11

Wetland A at Flag A-79 - View North

Photo 12

Wetland A at Flag A-79 - View West

Photo 13

Wetland A at Flag A-98 - View South

Photo 14

Wetland A at Flag A-98 - View West

Photo 15

Wetland B Sampling Point at Flag B-13

Photo 16

Alternate View of Wetland B Sampling Point at Flag B-13

Photo 17

Soil Test Pit for Wetland B
Sampling Point at Flag B-13

Photo 18

Upland B Sampling Point at
Flag B-13 - View West

Photo 19

Upland B Sampling Point at Flag B-13 - View East

Photo 20

Soil Test Pit for Upland B Sampling Point at Flag B-13

Photo 21

Wetland C - Upstream view of drainage ditch at Flag C-3

Photo 22

Wetland C - Downstream view of drainage ditch at Flag C-3

Photo 23

Wetland C - View East at Flag C-3

Photo 24

Wetland C - View West at Flag C-3

Photo 25

Wetland C -View South at Flag C-3

Photo 26

View Northwest at Wetland D Sampling Point 1

Photo 27

Soil Test Pit for Wetland D
Sampling Point 1

Photo 28

View West at Upland D
Sampling Point 1

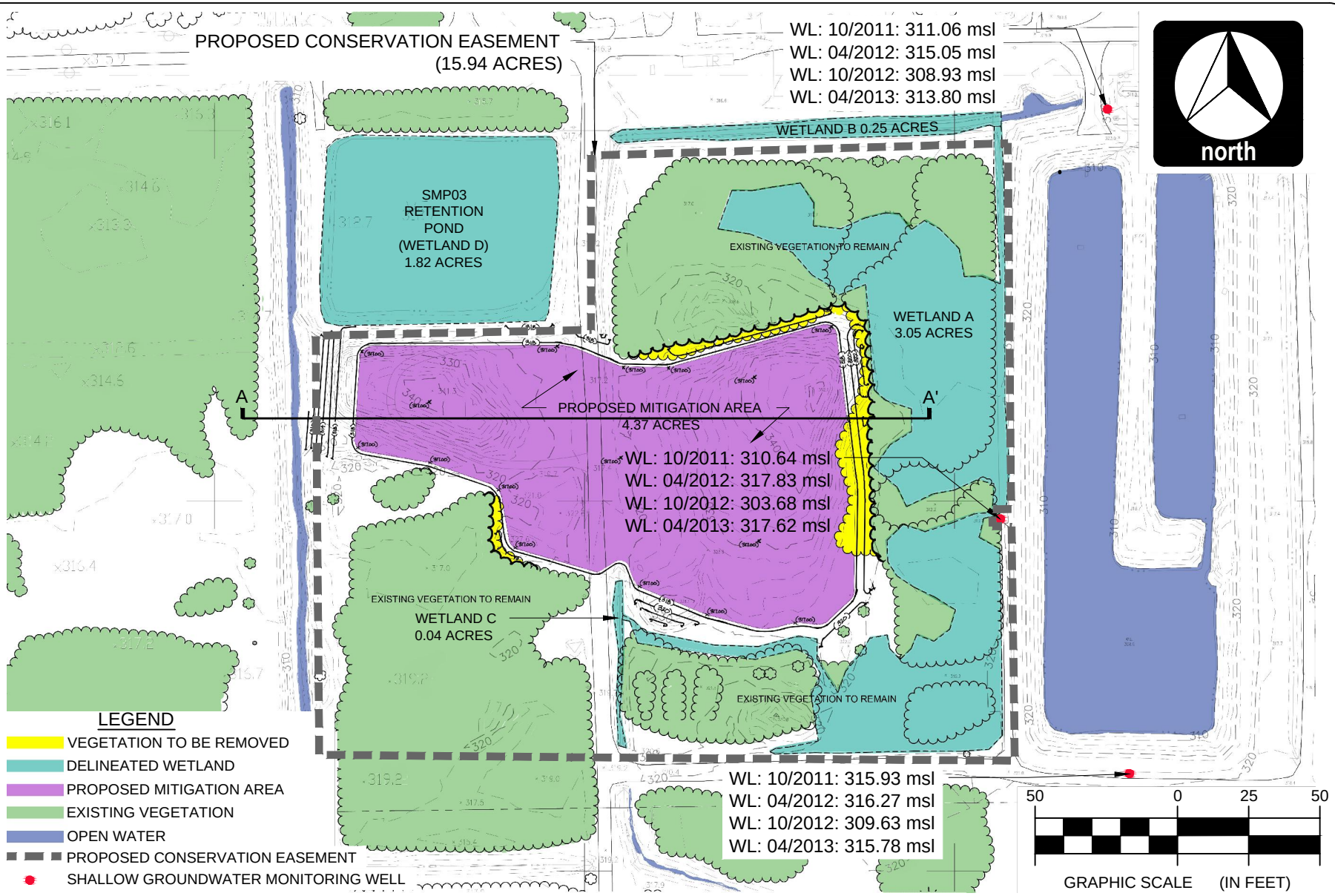
Photo 29

Soil Test Pit for Upland D
Sampling Point

Draft Wetland Mitigation and Monitoring Plan

APPENDIX D

Proposed Mitigation Area (Concept Plan)



PROJECT TITLE: **RMU-2 LANDFILL EXPANSION**	edr JOB NUMBER: **09022**
DRAWING TITLE: **DRAFT WETLAND MITIGATION PLAN**	DRAWING NUMBER: **L-1**
DRAWN BY: **KG** / CHECKED BY: **JP**	SCALE: **1" = 50'-0"** / DATE: **07/01/2013**

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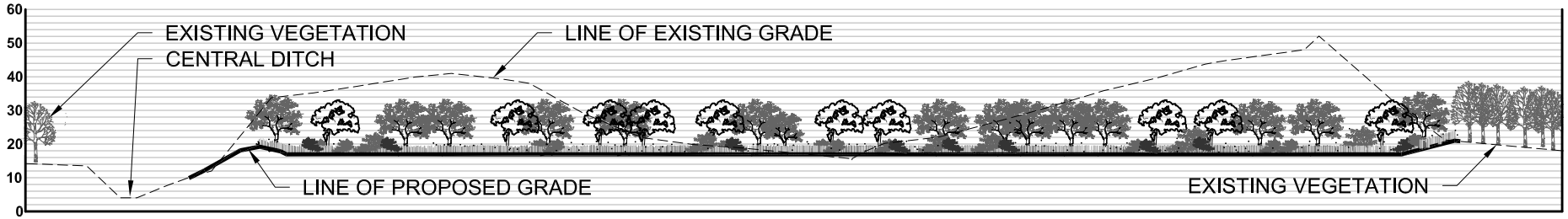
www.edrcompanies.com
phone: 315.471.0688



SECTION A-A'
VERTICAL SCALE: 1" = 50'-0"
HORIZONTAL SCALE: 1" = 100'-0"

FORESTED WETLAND PLANTING

BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COMMENTS
SALIX NIGRA	BLACK WILLOW	2.5"-3" CAL.	BALL&BURLAP	MIN. SPACING 30' O.C.
FRAXINUS PENNSYLVANICA	GREEN ASH	2"-2.5" CAL.	BALL&BURLAP	MIN. SPACING 30' O.C.
CORNUS RACEMOSA	GRAY DOGWOOD	8' HT.	BALL&BURLAP	MIN. SPACING 8' O.C.
ACER RUBRUM	RED MAPLE	2"-2.5" CAL	BALL&BURLAP	MIN. SPACING 30' O.C.

SEEDING -

ERNST RETENTION BASIN WILD LIFE MIX
ERNMX #: ERNMX-127
SEEDING RATE: 20 lb PER ACRE, OR 1/2 lb PER 1000 FT²

ERNST CONSERVATION SEEDS
1-800-873-3321

NORTHEAST WETLAND SHRUB / HERB MIX MIX
CODE: STCMX-10
SEEDING RATE: 2 lb PER ACRE @ 5 SEEDS PER SQ. FT.

SOUTHERN TIER CONSULTING
(585) 968-3120

PROJECT TITLE: **RMU-2 LANDFILL EXPANSION**		edr JOB NUMBER: **09022**	
DRAWING TITLE: **DRAFT WETLAND MITIGATION PLAN**		DRAWING NUMBER: **L-2**	
DRAWN BY: **KG**	CHECKED BY: **JP**	SCALE: **AS NOTED**	DATE: **07/01/2012**

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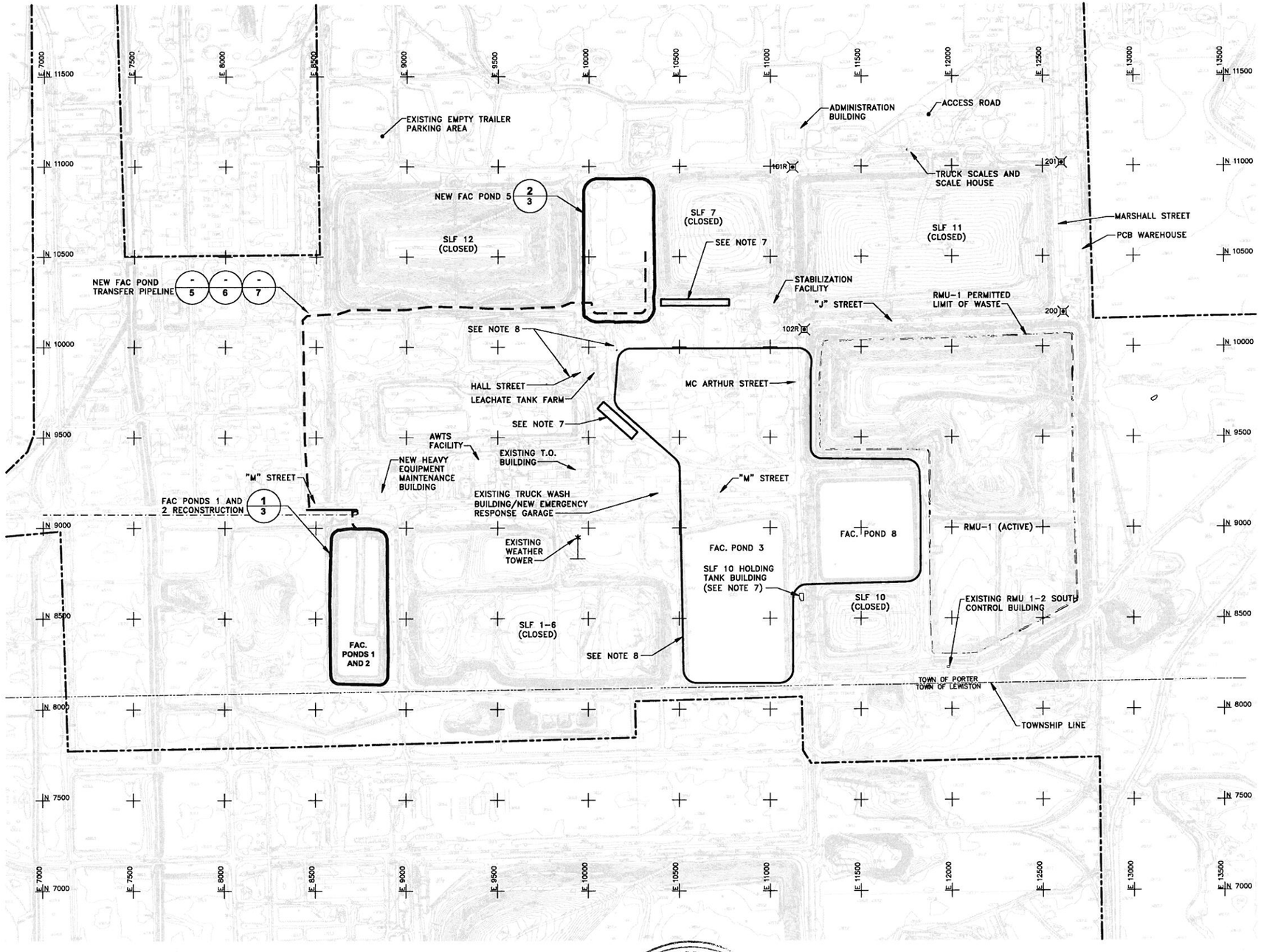
www.edrcompanies.com
phone: 315.471.0688

APPENDIX D

Site Plans



LEGEND:

BRUSHLINE	SIGN
CABLE MARKER	SWAMP
CATCH BASIN	TRAFFIC LIGHT
DROP INLET	TREE
FENCE	TREELINE
FIRE HYDRANT	UNIDENTIFIED OBJECT
GUARD RAIL	UTILITY POLE
LIGHT POLE	VALVE
MISCELLANEOUS POLE	WATER LINE
MONUMENT	EXISTING CONTOUR
POST	EXISTING GRADEBREAK
RAILROAD TRACKS	PROPERTY LINE

200 CONTROL MONUMENT (SEE TABLE BELOW)

2/3 DETAIL REFERENCE NUMBER / DRAWING REFERENCE NUMBER

E 13500 / N 7000 COORDINATE GRID (SEE NOTE 3)

RMU-1/RMU-2 CONTROL MONUMENTS

MONUMENTS	ELEVATION	CWM PLANT GRID		RMU-1 GRID		NY STATE PLANE COORDINATES (NAD-27)		NGVD-29 ELEVATION
		NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING	
102R	319.72	100+94.55	111+87.56	100+94.65	11+87.56	1,175,430.46	396,380.12	319.66
200	318.33	101+89.56	126+13.77	101+89.56	26+13.77	1,175,488.28	397,808.18	318.27
101R	316.01	109+94.28	111+23.09	---	---	1,176,331.436	396,339.034	315.92
201	316.62	110+17.82	126+3.49	---	---	---	---	---

CONTROL MONUMENTS NOTE:

1. RMU-1 EASTING GRID COORDINATES ARE SIMPLIFIED PLANT GRID COORDINATES. SUBTRACTING 10,000 FROM THE CWM PLANT GRID EASTING COORDINATE WILL CONVERT THE CWM PLANT GRID TO THE RMU-1 GRID. NOTE THAT NO CONVERSION IS REQUIRED FOR NORTHING COORDINATES.

NOTES:

1. TOPOGRAPHIC BASE MAP CONSISTS OF COMBINATION OF DATA COMPILED BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY DATED 5/31/01 BY AIR SURVEY CORP. (PROJECT NO.71010503). AND AN AUGUST 2008 SURVEY BY ENSOL, INC.
2. VERTICAL DATUM BASED ON NGS MEAN SEA LEVEL.
3. GRID COORDINATES SHOWN ARE CWM PLANT GRID.
4. CONTOUR INTERVAL 2 FT.
5. DASHED CONTOURS INDICATE THAT GROUND IS PARTIALLY OBSCURED BY VEGETATION OR SHADOWS. THESE AREAS MAY NOT MEET STANDARD ACCURACY AND REQUIRE FIELD VERIFICATION.
6. PROPERTY LINE IS APPROXIMATE. EASEMENTS AND RIGHT-OF-WAYS NOT SHOWN.
7. REFER TO DRAWINGS IN ATTACHMENT D-1 OF THE OVERALL SITE/RMU-1 PERMIT FOR FURTHER DETAIL.
8. REFER TO DRAWINGS IN ATTACHMENT J FOR FURTHER DETAIL.

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: K. DAVIS K. DAVIS K. WOOD K.SARTORI PIC: W. PORHAM PM: W. RANKIN TM: B. STONE LYR: ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIVE\B0023725\2011\B0023725G02.DWG PAGESETUP: M-LD28-PDF PLOTSTYLETABLE: PLTCONT1.CTB PLOTTED: 2/14/2013 2:00 PM BY: STEINBERGER, GEORGE
G:\ENVCAD\SYRACUSE\ACTIVE\B0023725\2011\B0023725G02.dwg LAYOUT: 2 SAVED: 2/13/2013 11:48 AM ACADVER: 18.1S (LMS TECH)
IMAGES: PROJECTNAME: —
XREFS: 23725X02 23725X01 23725X00

300' 0 300' 600'
1"=300'

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd

Professional Engineer's Name: JOSEPH MOLINA
Professional Engineer's No.: 072644
State: NY
Date Signed: 2/13/13
Project Mgr: TJF
Designed by: BMS/PTO
Drawn by: SJK
Checked by: BMS

STATE OF NEW YORK · JOSEPH MOLINA · 072644 · LICENSED PROFESSIONAL ENGINEER

ARCADIS

ARCADIS OF NEW YORK, INC.

CWM CHEMICAL SERVICES, LLC • MODEL CITY, NEW YORK
FAC POND 1/2 AND FAC POND 5 PERMIT DRAWINGS

SITE PLAN

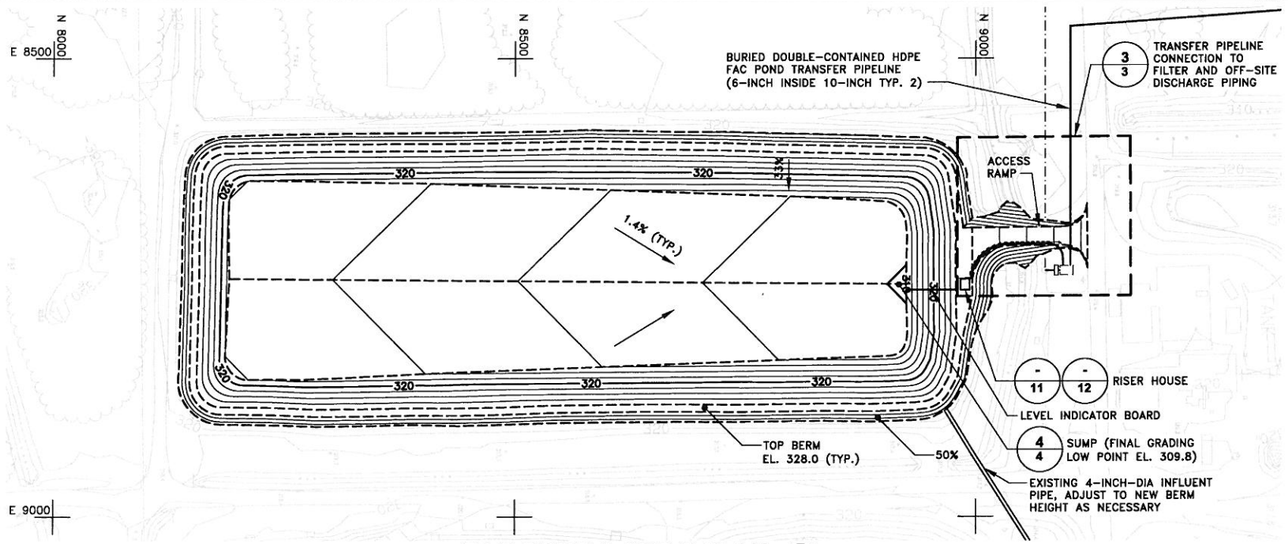
GENERAL

ARCADIS Project No.
B0023725.2011.00006

Date
FEBRUARY 2013

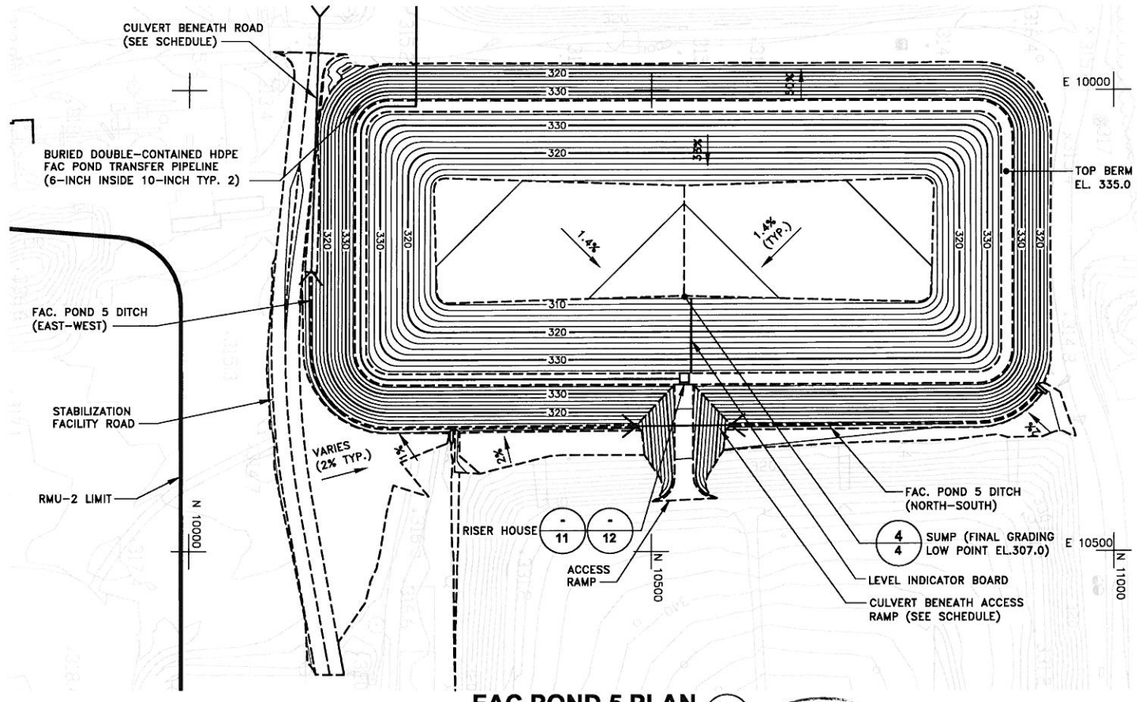
ARCADIS of New York, Inc.
6723 Towpath Road
P.O. Box 66
Syracuse, New York
TEL. 315.446.9120

2



FAC POND 1 AND 2 PLAN (1)

SCALE: 1"=80'



FAC POND 5 PLAN (2)

SCALE: 1"=80'

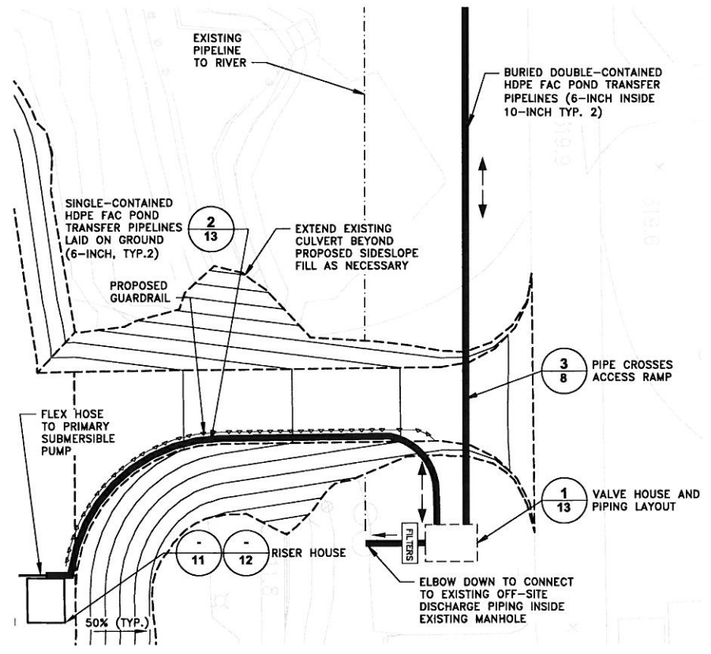
LEGEND:

- WATER LINE
- EXISTING CONTOUR
- EXISTING GRADE BREAK
- PROPERTY LINE
- 320 — PROPOSED INDEX ELEVATION CONTOUR
- PROPOSED INTERMEDIATE ELEVATION CONTOUR
- PROPOSED GRADE BREAK
- 31/3 — DETAIL REFERENCE NUMBER / DRAWING REFERENCE NUMBER
- N 8000 E 8500 — COORDINATE GRID

NOTE:

1. SEE DRAWING 2 FOR BASEMAP INFORMATION.
2. PROPOSED GRADES REPRESENT FINAL GRADING (TOP OF BALLAST LAYER ON FLOOR AND TOP OF PRIMARY LINER ON INTERIOR SIDESLOPES).

CULVERT ID	SIZE	SLOPE %
BENEATH ACCESS RAMP	24"	0.3%
BENEATH ROAD	36"	0.3%



TRANSFER PIPELINE CONNECTION TO FILTER AND OFF-SITE DISCHARGE PIPING (3)

SCALE: 1"=20'

XREFS:
23725X02
23725X01
23725X12
23725X00

IMAGES: PROJECTNAME: —

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: K. DAVIS B. DECLERCQ L. FORAKER K.SARTORI PIC: W. POPHAM PM: W. RANKIN TM: B. STONE LYR: ON=*;OFF=*REF*
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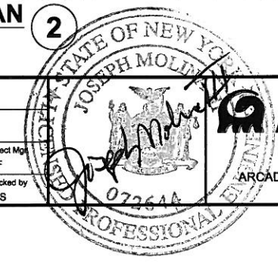
SCALE(S) AS INDICATED

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd

Professional Engineer's Name: JOSEPH MOLINA
Professional Engineer's No.: 072644
State: NY
Date Signed: 2/27/13
Project Mgr: TJF
Designed by: BMS/PTO
Drawn by: SJK
Checked by: BMS



ARCADIS
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CWM CHEMICAL SERVICES, LLC • MODEL CITY, NEW YORK
FAC POND 1/2 AND FAC POND 5 PERMIT DRAWINGS

FAC POND GRADING PLANS

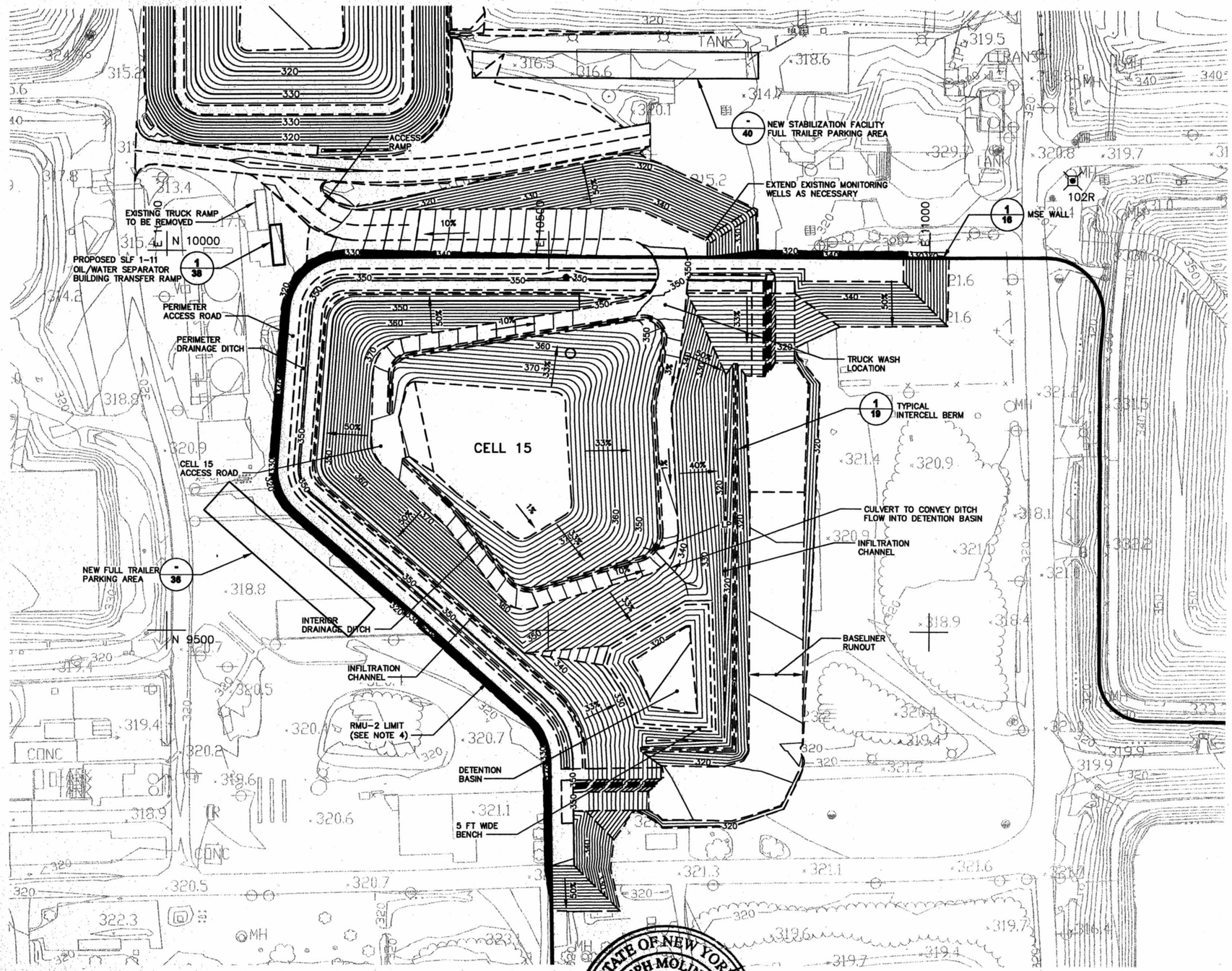
GENERAL

ARCADIS Project No.
B0023725.2011.00006

Date
FEBRUARY 2013

ARCADIS of New York, Inc.
6723 Towpath Road
P.O. Box 66
Syracuse, New York
TEL. 315.446.9120

3



LEGEND:

- APPROXIMATE PROPERTY LINE
- 310 — PROPOSED INDEX ELEVATION CONTOUR
- 308 — PROPOSED INTERMEDIATE ELEVATION CONTOUR
- PROPOSED GRADE BREAK
- PROPOSED RISER MANHOLE (2/13) (3/20)
- PROPOSED LEACHATE RISER VAULT
- ×320.0 PROPOSED SPOT ELEVATION
- LP PROPOSED PERIMETER DITCH LOW POINT
- HP PROPOSED PERIMETER DITCH HIGH POINT
- 200 PERMANENT CONTROL MONUMENT
- E 12500 N 10000 COORDINATE GRID
- 2/14 DETAIL REFERENCE NUMBER / DRAWING REFERENCE NUMBER

NOTES:

1. REFER TO DRAWING NO. 2 FOR ADDITIONAL BASE MAP INFORMATION.
2. PROPOSED GRADES SHOWN REPRESENT A COMBINATION OF FINAL AND INTERIM MSE WALL GRADES, OPERATIONS LAYER GRADES, AND INTERIM WASTE GRADES.
3. ACCESS ROADS TO BE CONSTRUCTED UP TO TOP OF MSE WALL AND OVER CELL SEPARATION BERM LOCATIONS AS NEEDED.
4. RMU-2 LIMIT REPRESENTS TOE OF PERIMETER MSE WALL.

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: K. DAVIS G. STOWELL L. FORAKER LD: PIC: W. POPHAM PM: W. RANKIN TM: B. STONE LYR: ON=*;OFF=*REF*
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XREFS: 23725X02 23725X01 23723X00 23723X13 23725X12
IMAGES:
PROJECTNAME:

1"=70' (70' 0 70' 140')

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd

Professional Engineer's Name: JOSEPH MOLINA
Professional Engineer's No.: 072644
State: NY
Date Signed: 11/13/09
Project Mgr.: WAR
Designed by: BMS/PTO
Drawn by: BKD
Checked by: BMS

STATE OF NEW YORK — JOSEPH MOLINA — 072644 — PROFESSIONAL ENGINEER

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ARCADIS OF NEW YORK, INC.

CWM CHEMICAL SERVICES, LLC • MODEL CITY, NEW YORK
RESIDUALS MANAGEMENT UNIT 2 PERMIT DRAWING

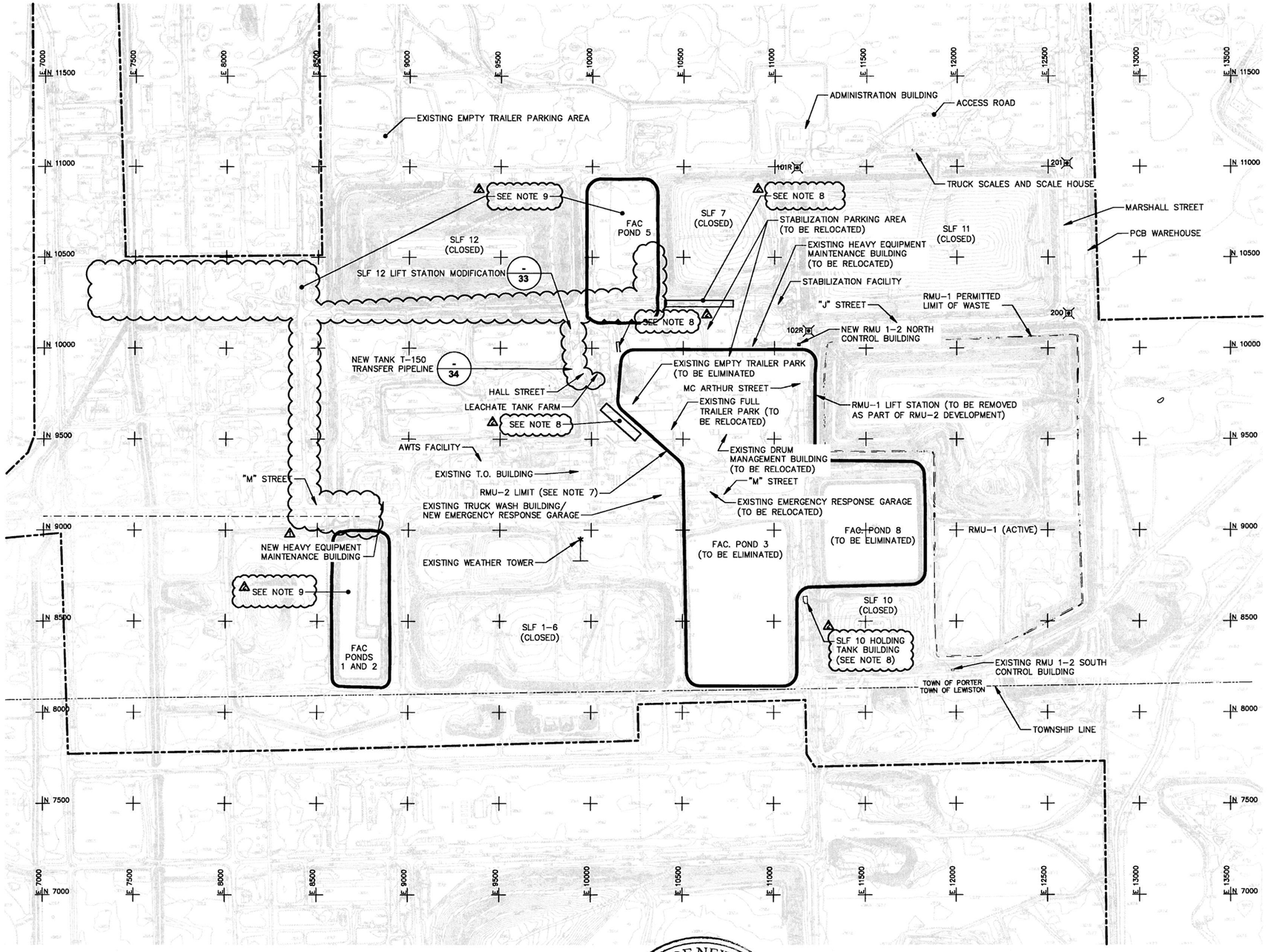
CELL 15 INITIAL FILL PROGRESSION

GENERAL

ARCADIS Project No. B0023725.2009.00006
Date AUGUST 2009

ARCADIS of New York, Inc.
6723 Towpath Road
P.O. Box 66
Syracuse, New York
TEL. 315.446.91220

8



LEGEND:

- BRUSHLINE
- CABLE MARKER
- CATCH BASIN
- DROP INLET
- FENCE
- FIRE HYDRANT
- GUARD RAIL
- LIGHT POLE
- MISCELLANEOUS POLE
- MONUMENT
- POST
- RAILROAD TRACKS
- SIGN
- SWAMP
- TRAFFIC LIGHT
- TREE
- TREELINE
- UNIDENTIFIED OBJECT
- UTILITY POLE
- VALVE
- WATER LINE
- EXISTING CONTOUR
- EXISTING GRADEBREAK
- PROPERTY LINE

200 CONTROL MONUMENT (SEE TABLE BELOW)

2 / 33 DETAIL REFERENCE NUMBER / DRAWING REFERENCE NUMBER

E 13500 / N 7000 COORDINATE GRID (SEE NOTE 3)

RMU-1/RMU-2 CONTROL MONUMENTS

MONUMENTS	ELEVATION	CWM PLANT GRID		RMU-1 GRID		NY STATE PLANE COORDINATES (NAD-27)		NGVD-29 ELEVATION
		NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING	
102R	319.72	100+94.55	111+87.56	100+94.65	11+87.56	1,175,430.46	396,380.12	319.66
200	318.33	101+89.56	126+13.77	101+89.56	26+13.77	1,175,488.28	397,808.18	318.27
101R	316.01	109+94.28	111+23.09	---	---	1,176,331.436	396,339.034	315.92
201	316.62	110+17.82	126+3.49	---	---	---	---	---

CONTROL MONUMENTS NOTE:

1. RMU-1 EASTING GRID COORDINATES ARE SIMPLIFIED PLANT GRID COORDINATES. SUBTRACTING 10,000 FROM THE CWM PLANT GRID EASTING COORDINATE WILL CONVERT THE CWM PLANT GRID TO THE RMU-1 GRID. NOTE THAT NO CONVERSION IS REQUIRED FOR NORTHING COORDINATES.

NOTES:

1. TOPOGRAPHIC BASE MAP CONSISTS OF COMBINATION OF DATA COMPILED BY PHOTOGRAMMETRIC METHODS FROM AERIAL PHOTOGRAPHY DATED 5/31/01 BY AIR SURVEY CORP. (PROJECT NO.71010503). AND AN AUGUST 2008 SURVEY BY ENSOL, INC.
2. VERTICAL DATUM BASED ON NGS MEAN SEA LEVEL.
3. GRID COORDINATES SHOWN ARE CWM PLANT GRID.
4. CONTOUR INTERVAL 2 FT.
5. DASHED CONTOURS INDICATE THAT GROUND IS PARTIALLY OBSCURED BY VEGETATION OR SHADOWS. THESE AREAS MAY NOT MEET STANDARD ACCURACY AND REQUIRE FIELD VERIFICATION.
6. PROPERTY LINE IS APPROXIMATE. EASEMENTS AND RIGHT-OF-WAYS NOT SHOWN.
7. RMU-2 LIMIT REPRESENTS TOE OF PERIMETER MSE WALL.
8. REFER TO DRAWINGS IN ATTACHMENT D-1 OF THE OVERALL SITE/RMU-1 PERMIT FOR FURTHER DETAIL.
9. REFER TO DRAWINGS IN ATTACHMENT D-2 OF THE OVERALL SITE/RMU-1 PERMIT FOR FURTHER DETAIL.

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: K. DAVIS K. DAVIS K. WOOD K.SARTORI PIC: W. POPHAM PM: W. RANKIN TM: B. STONE LYR: ON=*;OFF=*REF*
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XREFS: 23725X02 23725X01 23725X00
IMAGES: PROJECTNAME: —

1"=300' (300' 0 300' 600')

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd
2	2/2013	REVISED CALLOUTS AND NOTES	GNG	BMS
1	1/2012	REDESIGNED FAC POND TRANSFER PIPELINE	NWF	BMS

Professional Engineer's Name: JOSEPH MOLINA
Professional Engineer's No.: 072644

State	Date Signed	Project Mgr
NY	2/27/13	WAR
Designed by	Drawn by	Checked by
BMS/PTO	SJK	BMS

STATE OF NEW YORK JOSEPH MOLINA 072644 LICENSED PROFESSIONAL ENGINEER

ARCADIS

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CWM CHEMICAL SERVICES, LLC • MODEL CITY, NEW YORK
RESIDUALS MANAGEMENT UNIT 2 PERMIT DRAWING

RMU-2 SITE

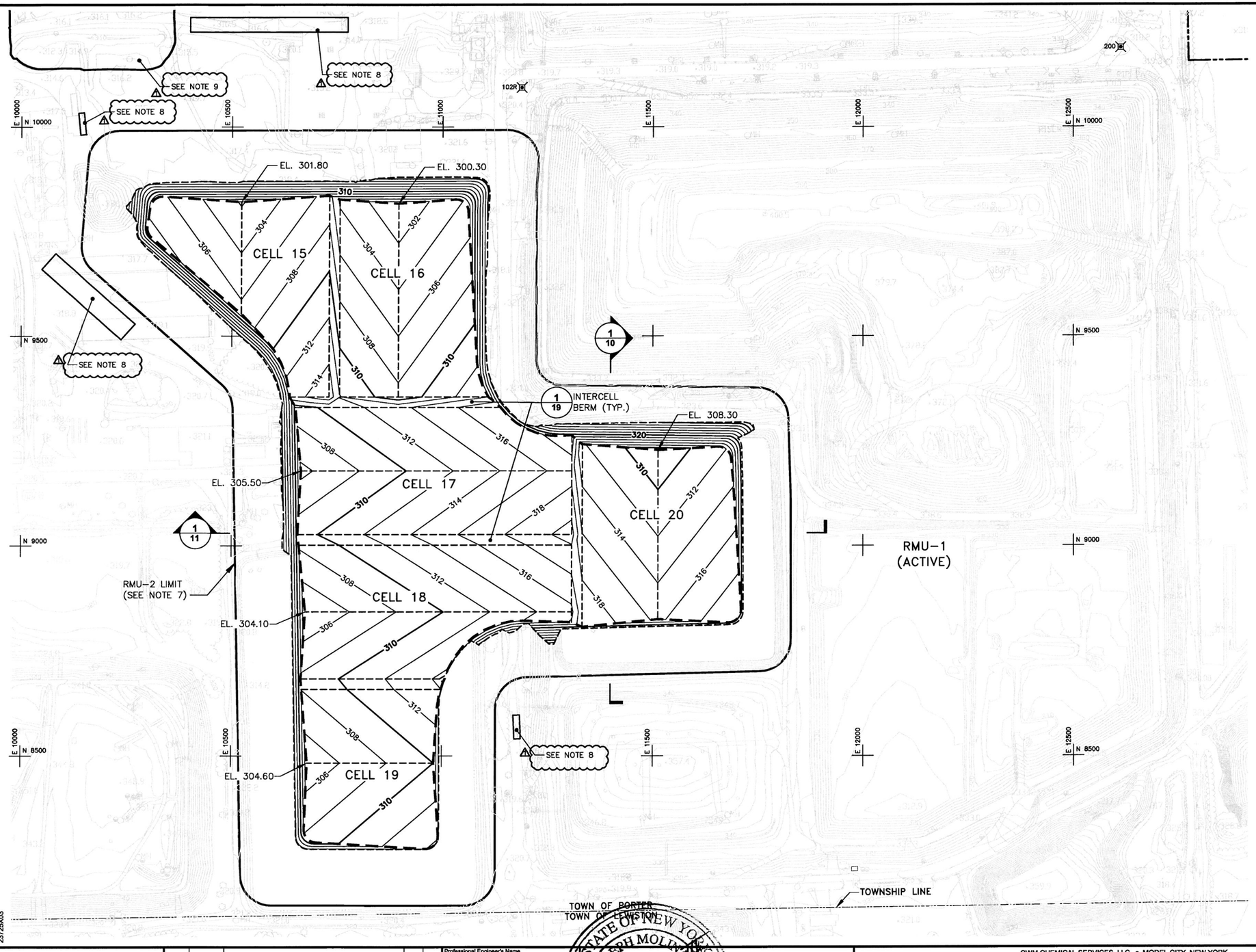
GENERAL

ARCADIS Project No. B0023725.2009.00006

Date AUGUST 2009

ARCADIS of New York, Inc.
6723 Towpath Road
P.O. Box 66
Syracuse, New York
TEL. 315.446.9120

2



LEGEND:

- APPROXIMATE PROPERTY LINE
- 310 — PROPOSED INDEX ELEVATION CONTOUR
- 308 — PROPOSED INTERMEDIATE ELEVATION CONTOUR
- PROPOSED GRADE BREAK
- PROPOSED LOW PERMEABILITY CUT-OFF WALL (4/15)
- 200 — PERMANENT CONTROL MONUMENT
- EXISTING GROUNDWATER MONITORING WELLS
- E 12500 / N 10000 — COORDINATE GRID
- 4/15 — DETAIL REFERENCE NUMBER / DRAWING REFERENCE NUMBER
- 1/10 — SECTION REFERENCE

NOTES:

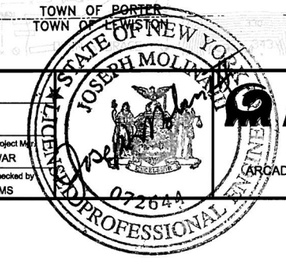
1. REFER TO DRAWING NO. 2 FOR ADDITIONAL BASE MAP INFORMATION.
2. PROPOSED GRADES SHOWN ARE APPROXIMATE LIMITS OF EXCAVATION. TOPSOIL, GENERAL FILL AND CLAY WITHIN THE EXCAVATION AREA WILL BE STRIPPED AND STOCKPILED IN AREAS DESIGNATED BY THE OWNER.
3. SURFACE DRAINAGE SHALL BE DIRECTED AROUND EXCAVATIONS. SURFACE WATER SHALL BE PUMPED TO ADJACENT DRAINAGE DITCHES AND ROUTED TO EXISTING STORMWATER RETENTION BASINS DURING CONSTRUCTION.
4. PROPOSED SPOT ELEVATIONS AT CELL LOW POINTS REPRESENT GENERAL FLOOR SUBGRADE ELEVATION AND DO NOT REPRESENT SUMP EXCAVATING GRADES. ADDITIONAL EXCAVATION IS REQUIRED BELOW GRADES SHOWN ON THIS DRAWING AT EACH CELL SUMP LOCATION. SEE DRAWING NOS. 12, 13, AND 14 FOR ADDITIONAL INFORMATION. PRIOR TO SUMP EXCAVATION, THE POTENTIAL FOR UPLIFT SHALL BE IDENTIFIED BY THE PROTOCOL OUTLINED IN THE RMU-2 CONSTRUCTION QUALITY ASSURANCE MANUAL. APPROPRIATE CONDITIONS SHALL EXIST PRIOR TO SUMP EXCAVATIONS.
5. RELOCATE OR ABANDON EXISTING UTILITIES PER PROJECT SPECIFICATIONS AND WITH AUTHORIZATION OF OWNER.
6. DEMOLISH EXISTING FACILITIES (e.g., BUILDING STRUCTURES, FOUNDATIONS) WITHIN LIMITS OF LANDFILL PER PROJECT SPECIFICATIONS AND WITH AUTHORIZATION OF OWNER.
7. RMU-2 LIMIT REPRESENTS TOE OF PERIMETER MSE WALL.
8. REFER TO DRAWINGS IN ATTACHMENT D-1 OF THE OVERALL SITE/RMU-1 PERMIT FOR FURTHER DETAIL.
9. REFER TO DRAWINGS IN ATTACHMENT D-2 OF THE OVERALL SITE/RMU-1 PERMIT FOR FURTHER DETAIL.

1"=120' (120' 0 120' 240')

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd
1	2/2013	REVISED CALLOUTS AND NOTES	GNG	BMS

Professional Engineer's Name: JOSEPH MOLINA
Professional Engineer's No.: 072644
State: NY
Date Signed: 2/21/13
Project Mgr: WAR
Designed by: BMS/PTO
Drawn by: SJK
Checked by: BMS



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RESIDUALS MANAGEMENT UNIT 2 PERMIT DRAWING

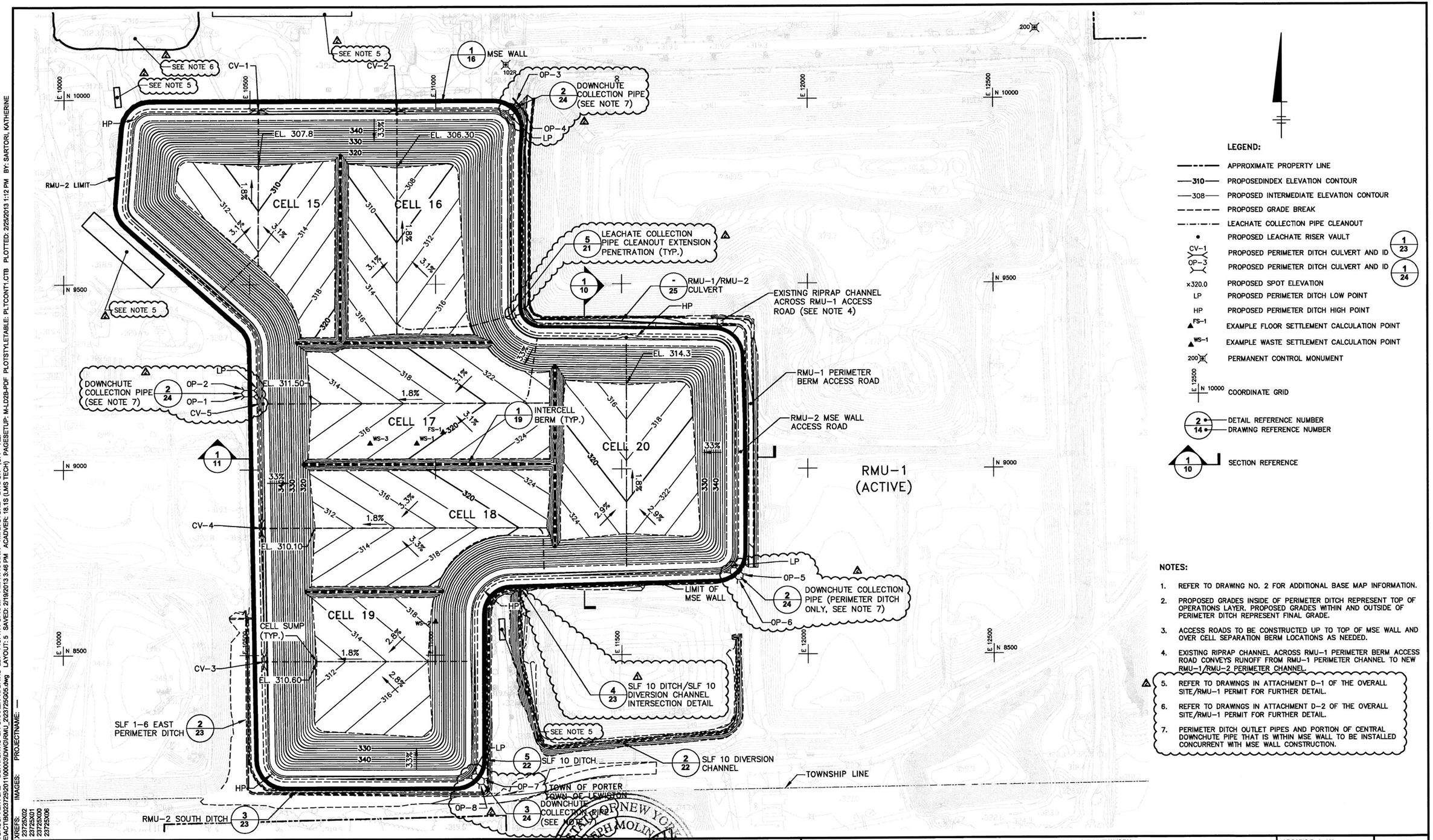
EXCAVATION GRADES

GENERAL

ARCADIS Project No.: B0023725.2009.00006
Date: AUGUST 2009

ARCADIS of New York, Inc.
6723 Towpath Road
P.O. Box 66
Syracuse, New York
TEL. 315.446.9120

3



LEGEND:

- APPROXIMATE PROPERTY LINE
- 310 PROPOSEDINDEX ELEVATION CONTOUR
- 308 PROPOSED INTERMEDIATE ELEVATION CONTOUR
- PROPOSED GRADE BREAK
- LEACHATE COLLECTION PIPE CLEANOUT
- PROPOSED LEACHATE RISER VAULT
- CV-1 PROPOSED PERIMETER DITCH CULVERT AND ID (1/23)
- OP-3 PROPOSED PERIMETER DITCH CULVERT AND ID (1/24)
- x320.0 PROPOSED SPOT ELEVATION
- LP PROPOSED PERIMETER DITCH LOW POINT
- HP PROPOSED PERIMETER DITCH HIGH POINT
- FS-1 EXAMPLE FLOOR SETTLEMENT CALCULATION POINT
- WS-1 EXAMPLE WASTE SETTLEMENT CALCULATION POINT
- 200 PERMANENT CONTROL MONUMENT
- E 12500 / N 10000 COORDINATE GRID
- 2/14 DETAIL REFERENCE NUMBER / DRAWING REFERENCE NUMBER
- 1/10 SECTION REFERENCE

NOTES:

1. REFER TO DRAWING NO. 2 FOR ADDITIONAL BASE MAP INFORMATION.
2. PROPOSED GRADES INSIDE OF PERIMETER DITCH REPRESENT TOP OF OPERATIONS LAYER. PROPOSED GRADES WITHIN AND OUTSIDE OF PERIMETER DITCH REPRESENT FINAL GRADE.
3. ACCESS ROADS TO BE CONSTRUCTED UP TO TOP OF MSE WALL AND OVER CELL SEPARATION BERM LOCATIONS AS NEEDED.
4. EXISTING RIPRAP CHANNEL ACROSS RMU-1 PERIMETER BERM ACCESS ROAD CONVEYS RUNOFF FROM RMU-1 PERIMETER CHANNEL TO NEW RMU-1/RMU-2 PERIMETER CHANNEL.
5. REFER TO DRAWINGS IN ATTACHMENT D-1 OF THE OVERALL SITE/RMU-1 PERMIT FOR FURTHER DETAIL.
6. REFER TO DRAWINGS IN ATTACHMENT D-2 OF THE OVERALL SITE/RMU-1 PERMIT FOR FURTHER DETAIL.
7. PERIMETER DITCH OUTLET PIPES AND PORTION OF CENTRAL DOWNCHUTE PIPE THAT IS WITHIN MSE WALL TO BE INSTALLED CONCURRENT WITH MSE WALL CONSTRUCTION.

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: K. DAVIS L. FORAKER K. DAVIS LD: PIC: W. POPHAM PM: W. RANKIN TM: B. STONE LYR: ON=*;OFF=*REF*
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XREFS: 2372SX02 2372SX01 2372SX00 2372SX06 IMAGES: PROJECTNAME: —

1"=120' (120' 0 120' 240')

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd
2	2/2013	REVISED CALLOUTS AND NOTES	GNG	BMS
1	1/2012	ADDITIONAL CALLOUT	NWF	BMS

Professional Engineer's Name: JOSEPH MOLINA
Professional Engineer's No.: 072644
State: NY | Date Signed: 2/27/13 | Project Mgr.: WAR
Designed by: BMS/PTO | Drawn by: SJK | Checked by: BMS

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TOP OF OPERATIONS LAYER GRADES

GENERAL

ARCADIS Project No.: B0023725.2009.00006
Date: AUGUST 2009

ARCADIS of New York, Inc.
6723 Towpath Road
P.O. Box 66
Syracuse, New York
TEL. 315.446.9120

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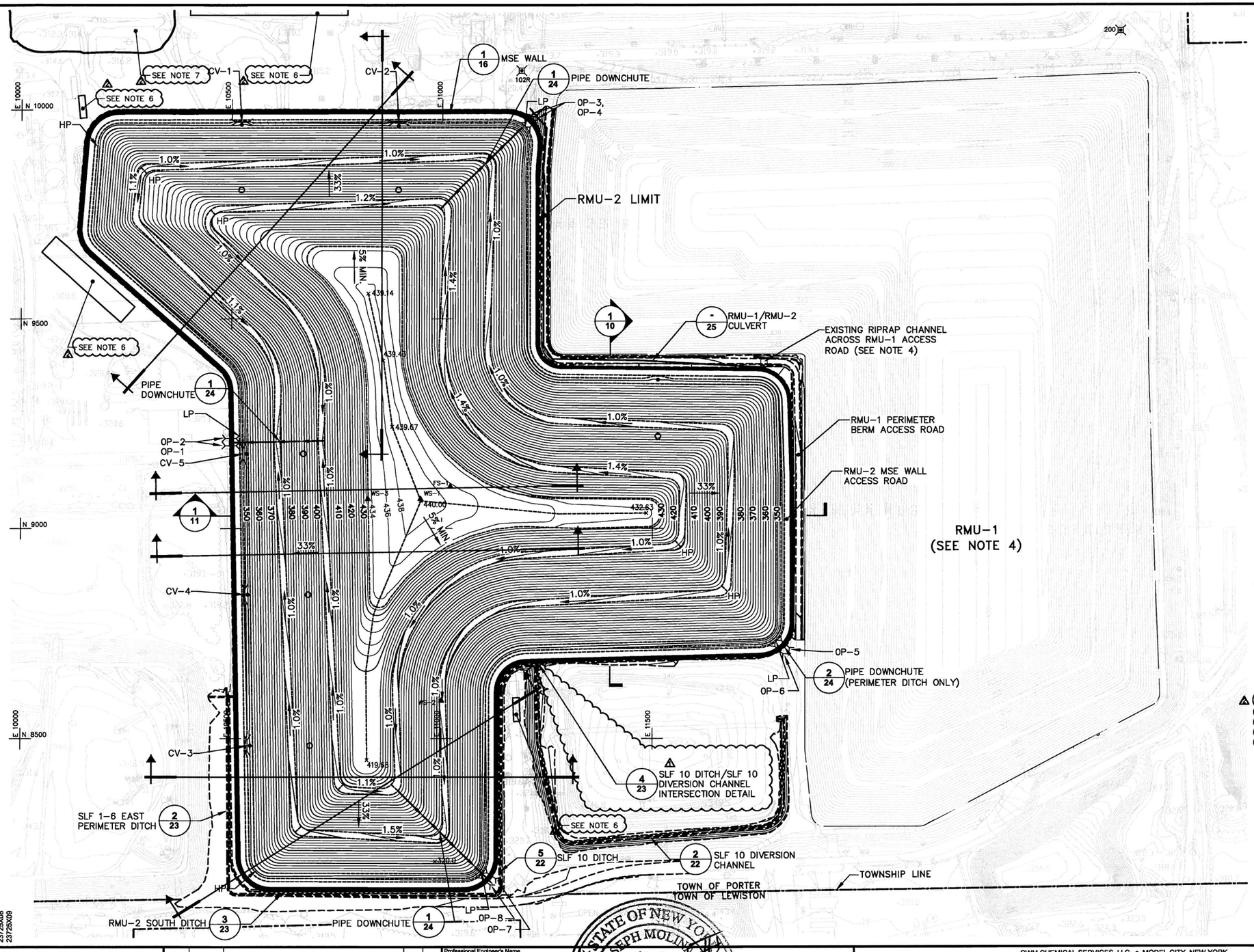

LEGEND:

- APPROXIMATE PROPERTY LINE
- 310 PROPOSED INDEX ELEVATION CONTOUR
- 428 PROPOSED INTERMEDIATE ELEVATION CONTOUR
- PROPOSED GRADE BREAK
- PROPOSED RISER MANHOLE (3/20)
- PROPOSED LEACHATE RISER VAULT
- SLOPE STABILITY SECTION
- CV-1 PROPOSED PERIMETER DITCH CULVERT AND ID (1/23)
- OP-3 PROPOSED PERIMETER DITCH CULVERT AND ID (1/24)
- x320.0 PROPOSED SPOT ELEVATION
- LP PROPOSED PERIMETER DITCH LOW POINT
- HP PROPOSED PERIMETER DITCH HIGH POINT
- FS-1 SETTLEMENT CALCULATION POINT
- 200 PERMANENT CONTROL MONUMENT
- E 12500 N 10000 COORDINATE GRID
- 2/14 DETAIL REFERENCE NUMBER / DRAWING REFERENCE NUMBER
- 1/10 SECTION REFERENCE

NOTES:

1. REFER TO DRAWING NO. 2 FOR ADDITIONAL BASE MAP INFORMATION.
2. PROPOSED GRADES SHOWN INSIDE OF PERIMETER DITCH ARE TOP OF WASTE GRADES. PROPOSED GRADES WITHIN AND OUTSIDE PERIMETER DICTH ARE FINAL GRADES. (2)
3. MSE WALL ACCESS RAMPS TO BE DESIGNED/CONSTRUCTED AS NEEDED DURING LANDFILL OPERATION..
4. EXISTING RIPRAP CHANNEL ACROSS RMU-1 PERIMETER BERM ACCESS ROAD CONVEYS RUNOFF FROM RMU-1 PERIMETER CHANNEL TO NEW RMU-1/RMU-2 PERIMETER CHANNEL.
5. PROPOSED TOP OF WASTE GRADES DO NOT REFLECT LOCAL GRADING PROXIMATE TO PIPE DOWNCHUTES. PROPOSED TOP OF WASTE GRADES DO NOT REFLECT EXISTENCE OF INFILTRATION CHANNEL AT LANDFILL PERIMETER.
6. REFER TO DRAWINGS IN ATTACHMENT D-1 OF THE OVERALL SITE/RMU-1 PERMIT FOR FURTHER DETAIL. (2)
7. REFER TO DRAWINGS IN ATTACHMENT D-2 OF THE OVERALL SITE/RMU-1 PERMIT FOR FURTHER DETAIL.

1"=120' (120' 0 120' 240')

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd
2	2/2013	REVISED CALLOUTS AND NOTES	GNG	BMS
1	1/2012	ADDITIONAL CALLOUT	NWF	BMS

Professional Engineer's Name: JOSEPH MOLINA
Professional Engineer's No.: 072644
State: NY | Date Signed: 2/27/13 | Project Mgr: WAR
Designed by: BMS/PTO | Drawn by: SJK | Checked by: BMS

STATE OF NEW YORK — JOSEPH MOLINA — 072644 — PROFESSIONAL ENGINEER

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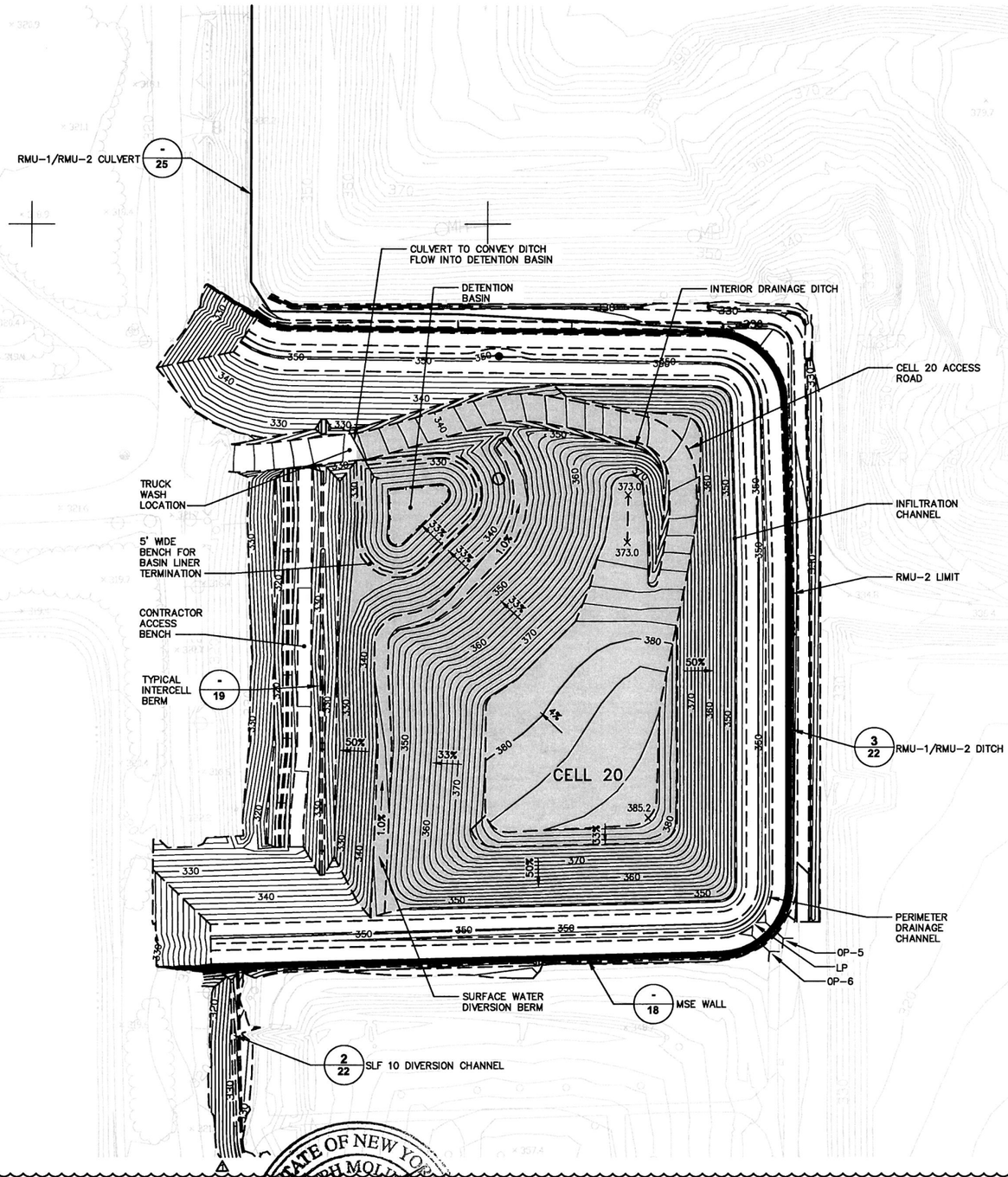
CWM CHEMICAL SERVICES, LLC • MODEL CITY, NEW YORK
RESIDUALS MANAGEMENT UNIT 2 PERMIT DRAWING

TOP OF VEGETATIVE COVER GRADES

GENERAL

ARCADIS Project No.: B0023725.2009.00006
Date: AUGUST 2009
ARCADIS of New York, Inc.
6723 Towpath Road
P.O. Box 66
Syracuse, New York
TEL. 315.446.9120

7



LEGEND:

- APPROXIMATE PROPERTY LINE
- 310 PROPOSED INDEX ELEVATION CONTOUR
- 308 PROPOSED INTERMEDIATE ELEVATION CONTOUR
- PROPOSED GRADE BREAK
- PROPOSED RISER MANHOLE (2/13)
- PROPOSED LEACHATE RISER VAULT
- CV-1 PROPOSED PERIMETER DITCH CULVERT AND ID (1/23)
- OP-3 PROPOSED PERIMETER DITCH CULVERT AND ID (1/24)
- X 320.0 PROPOSED SPOT ELEVATION
- LP PROPOSED PERIMETER DITCH LOW POINT
- HP PROPOSED PERIMETER DITCH HIGH POINT
- 200 PERMANENT CONTROL MONUMENT
- E 12500 N 10000 COORDINATE GRID
- 2/14 DETAIL REFERENCE NUMBER / DRAWING REFERENCE NUMBER
- WASTE PLACEMENT AREA

NOTES:

1. REFER TO DRAWNG NO. 2 FOR ADDITIONAL BASE MAP INFORMATION.
2. PROPOSED GRADES SHOWN REPRESENT A COMBINATION OF FINAL AND INTERIM MSE WALL GRADES, OPERATIONS LAYER GRADES, AND INTERIM WASTE GRADES.
3. ACCESS ROAD TO BE CONSTRUCTED OVER CELL SEPARATION BERM.

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: K. DAVIS G. STOWELL L. FORAKER LD: PIC: W. POPHAM PM: W. RANKIN TM: B. STONE LYR: ON=*;OFF=*REF*
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XREFS: IMAGES: PROJECTNAME: —
23725X02
23725X01
23725X00
23725X16

1"=70' (70' 0 70' 140')

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd
1	2/2013	CHANGED INITIAL OPERATING CELL FROM 15 TO 20 AND MISCELLANEOUS REVISIONS	NWF	BMS

Professional Engineer's Name: JOSEPH MOLINA
Professional Engineer's No.: 072644
State: NY | Date Signed: 2/27/13 | Project Mgr: WAR
Designed by: BMS/PTO | Drawn by: SJK | Checked by: BMS

ARCADIS
ARCADIS OF NEW YORK, INC.

CWM CHEMICAL SERVICES, LLC • MODEL CITY, NEW YORK
RESIDUALS MANAGEMENT UNIT 2 PERMIT DRAWING

CELL 20 INITIAL FILL PROGRESSION

GENERAL

ARCADIS Project No.: B0023725.2009.00006
Date: AUGUST 2009

ARCADIS of New York, Inc.
6723 Towpath Road
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TEL. 315.446.9120

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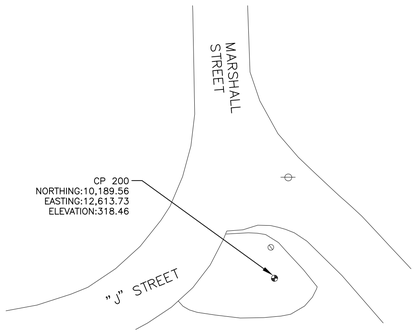


SITE CONTROL POINT 200
SCALE: 1" = 40'

PROJECT INFORMATION

Owner:	Chemical Waste Management 1550 Balmer Road Youngstown, New York 14174 716-286-0325
Tax Account Nos.:	61.00-2-1
Parcel Size:	482.53 acres
Project Area:	5.0 acres
Proposed Development:	45,596 s.f. Drum Management Building

ZONING INFORMATION

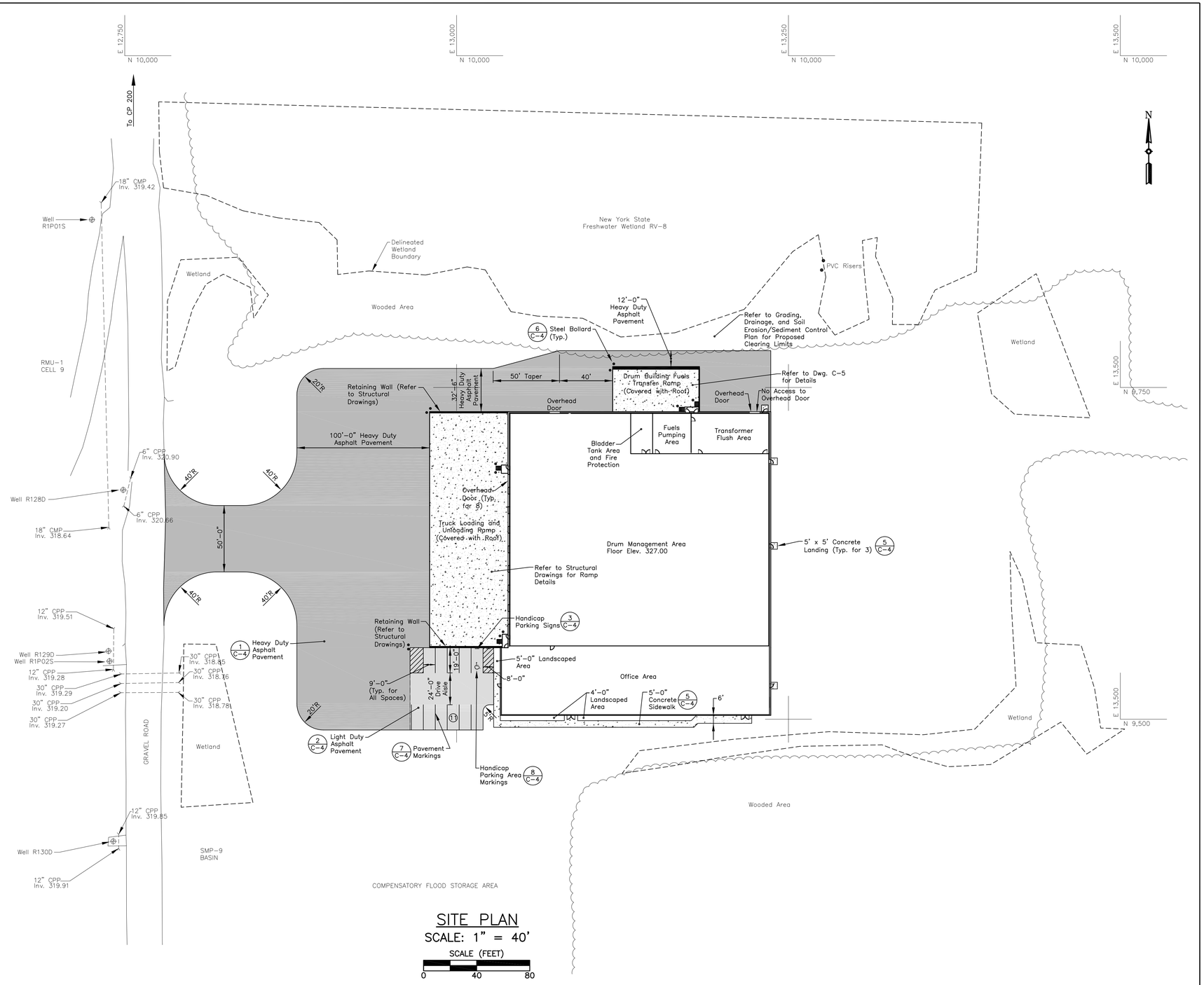
District: M-3 Heavy Industrial

Zoning Requirements:	Required	Proposed
Min. Lot Size	2.5 acres	482.53 acres
Max. Building Height	50 l.f.	?? l.f.

Parking Requirements: 1 space per 100 s.f. net floor area (office, professional, or business)
Must be a minimum of 80% and a maximum of 110% of required spaces

45,596 s.f./100 s.f. = 456 parking spaces
80% x 456 spaces = 365 parking spaces

Proposed Parking: 11 spaces



SITE PLAN
SCALE: 1" = 40'

SCALE (FEET)
0 40 80

NO.	DATE	APPR.	REVISION
1	06/10/12	GFT	REVISIONS TO ADDRESS 04/23/12 NYSDEC REVIEW COMMENTS
2	05/30/13	GFT	REVISIONS TO INCORPORATE WETLAND DELINEATION

GREAT LAKES ENVIRONMENTAL & SAFETY CONSULTANTS, INC.
50 RIDGE ROAD
BUFFALO, NEW YORK 14218
716-827-0700

WASTE MANAGEMENT

DRUM MANAGEMENT BUILDING RELOCATION PROJECT
CWM CHEMICAL SERVICES, LLC.
MODEL CITY FACILITY
MODEL CITY, NEW YORK

CHECKED		DATE	
DESIGN ENGINEER	GFT		
PROJECT ENGINEER	GFT		
PROJECT MANAGER			
APPROVED		DRAWN	HKT
APPROVED		SCALE	1" = 40'

SITE PLAN

DATE	6-20-12	DRAWING NO.	C-2
REVISION DATE	MAY 30, 2013	REV. NO.	
JOB NO.	11-406	SHEET	OF
FILE NAME:	SITE PLAN.DWG		

WELL ELEVATIONS (FOR USE AS BENCHMARKS)		
	ELEVATIONS (FT.)	
WELL ID	TOP OF INNER PVC RISER	TOP OF OUTER METAL CASING
R1P01S	323.898	324.525
R128D	326.807	327.169
R129D	327.378	327.764
R1P02S	327.248	327.806
R130D	325.543	325.925

NOTE

Construction activities may warrant the installation of additional erosion and sedimentation control devices on a temporary or permanent basis. The Contractor is responsible for recognizing these situations and for providing necessary erosion and sedimentation control devices to prevent transmission of sediments from the site. The Contractor should be aware that the site and offsite areas contain wetland areas which should not be disturbed or impacted. Extreme caution should be exercised near wetland areas to prevent deposition of sediments within or near the wetland boundaries.

SOIL EROSION/SEDIMENTATION CONTROL NOTES

1. Contractor shall install erosion and siltation control measures during construction to prevent off-site transport and deposition of materials. All erosion and siltation control measures shall be in place and approved by the Town or their duly noted representative prior to any construction activities, including mowing.
2. The temporary erosion/sedimentation control measures depicted on the site plan shall be supplemented with additional controls if found necessary during construction. Contractor is responsible for establishing the controls during construction, and removing the controls following re-establishment of ground cover.
3. All sedimentation control structures shall remain in effective operating condition.
4. No erosion or sediment control measures may be removed until the upland areas are stabilized and/or approval of their removal has been granted by the Town.
5. All access to and from the site shall be via the stabilized construction entrance, which shall be kept clean and free of debris and sediment. Any debris or sediment which makes its way to the public highway shall be immediately removed.
6. Any erosion or sediment control measure shall be immediately cleaned, repaired, and/or replaced upon notice of any damage.
7. All disturbed areas where construction activities have temporarily or permanently ceased shall be stabilized within 14 days.
8. All erosion and sediment control methods are to be designed and installed in accordance with the latest edition of the New York State Standards and Specifications for Erosion and Sediment Control.
9. Seed Mixes:

Temporary (50 lbs. per acre)

Annual Ryegrass	50% by Weight (90% Purity)
Tall Fescue	50% by Weight (90% Purity)

Permanent

Apply lawn seed mix at a rate of 5 lbs. per 1,000 s.f. of lawn area using the following proportions by weight:

Lawn Areas

% by Weight in Mixture	Species or Variety
45	Kentucky Bluegrass
40	Red Fescue (commercial)
15	Common Ryegrass

Rate of lawn fertilizer to be 25 lbs. per 1,000 s.f.

CONSTRUCTION SEQUENCE

Step 1 Install silt fence at the locations indicated on the plan. Install a double row of silt fence near wetland areas.

Step 2 Install stabilized construction entrance.

Step 3 Remove trees and brush within the proposed work areas and dispose of trunks, stumps, and branches at an onsite disposal area.

Step 4 Strip topsoil from the proposed pavement areas, drainage swales, lawn areas, and building areas and place it within the designated storage area.

Step 5 Construct the building pad using imported embankment material.

Step 6 Stabilize exposed ground areas with temporary seed mix.

Step 7 Install underground utility services to the buildings.

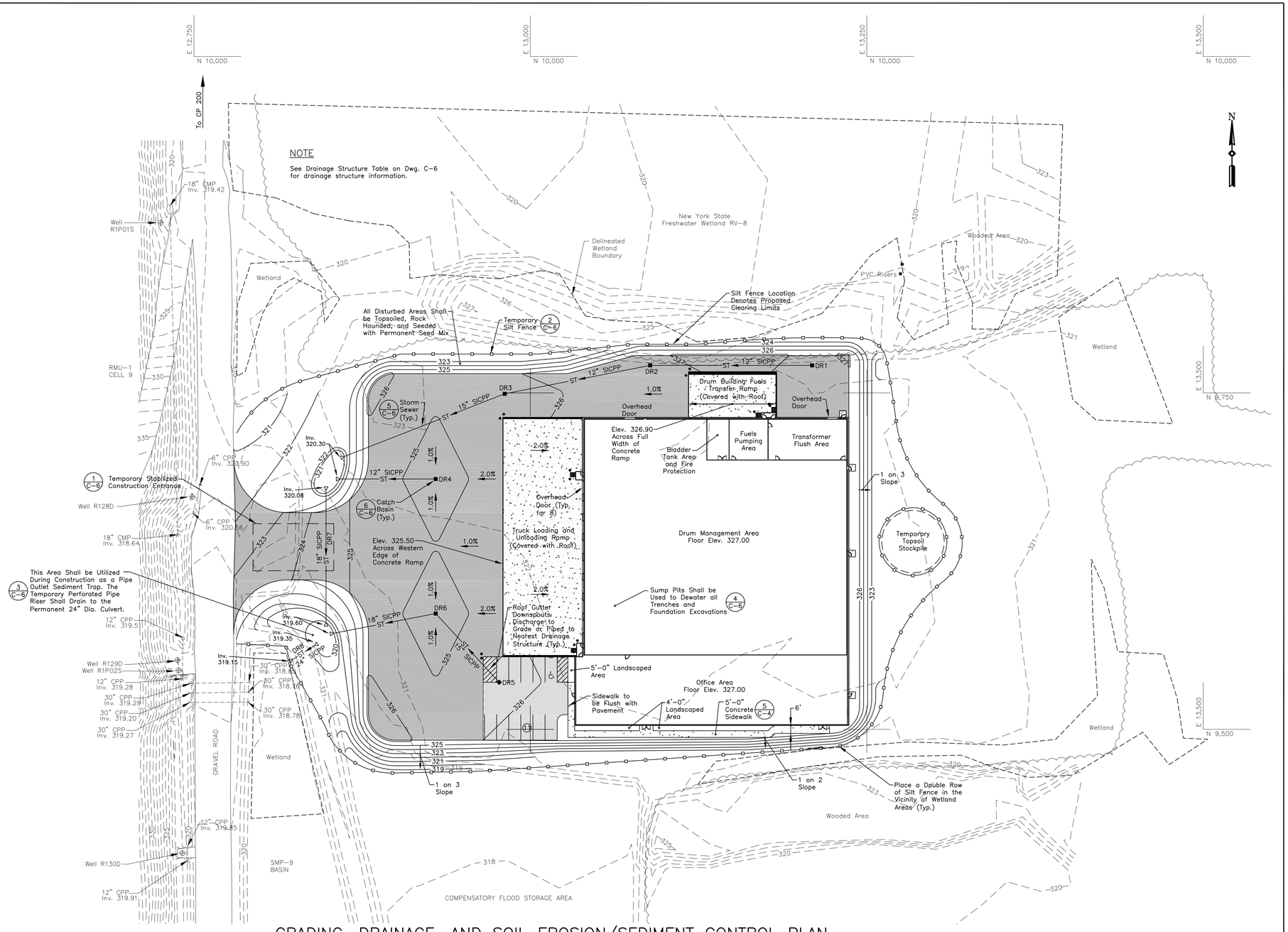
Step 8 Prepare building pads, construct foundations, and immediately place crushed stone subbase material for the floor slabs.

Step 9 Boxout pavement area and immediately place geotextile fabric and crushed stone base material.

Step 10 Fine grade, topsoil, seed, and mulch all areas that will not require future disturbance.

Step 11 Following construction of pavements, remove accumulated sediment from the drainage swales and topsoil, seed, and mulch all remaining disturbed areas.

Step 12 Following establishment of a healthy growth of turf within all disturbed areas, remove the silt fence.



GRADING, DRAINAGE, AND SOIL EROSION/SEDIMENT CONTROL PLAN

SCALE: 1" = 40'

SCALE (FEET)

0 40 80

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WASTE MANAGEMENT

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CWM CHEMICAL SERVICES, LLC.
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CHECKED		DATE	
DESIGN ENGINEER	GFT		
PROJECT ENGINEER	GFT		
PROJECT MANAGER			
APPROVED			
APPROVED			

GRADING, DRAINAGE, AND SOIL EROSION/SEDIMENT CONTROL PLAN

DRAWN	HKT	DATE	6-20-12	REVISION DATE	MAY 30, 2013
SCALE	1" = 40'	JOB NO.	11-406	FILE NAME	GRADING PLAN.DWG

DRAWING NO. C-3

REV. NO.

SHEET OF