Appendix O

1966 to 2008 Historical Photo Analysis



Re: Model City, New York - 1966 to 2008 Historical Photo Analysis

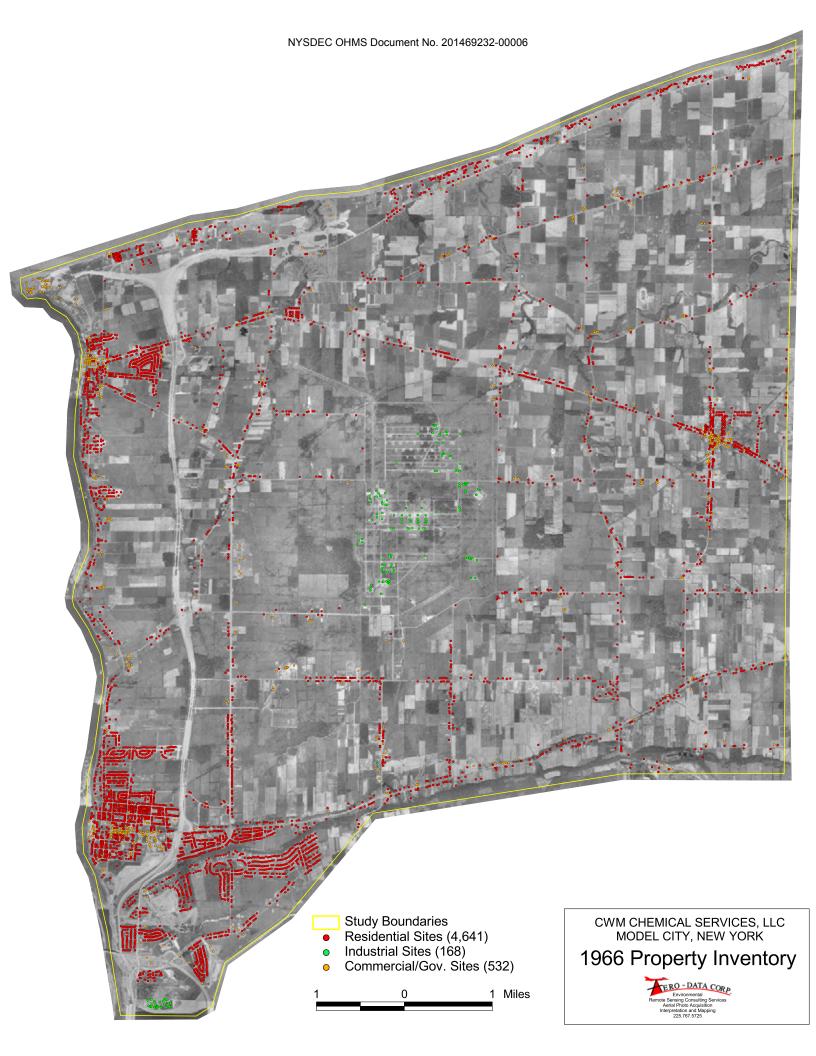
Aero-Data Corporation is an aerial mapping company based in Baton Rouge, Louisiana. We specialize in the acquisition of historical aerial photography from sources across North America as well as maintaining our own extensive photo library of sites across the United States.

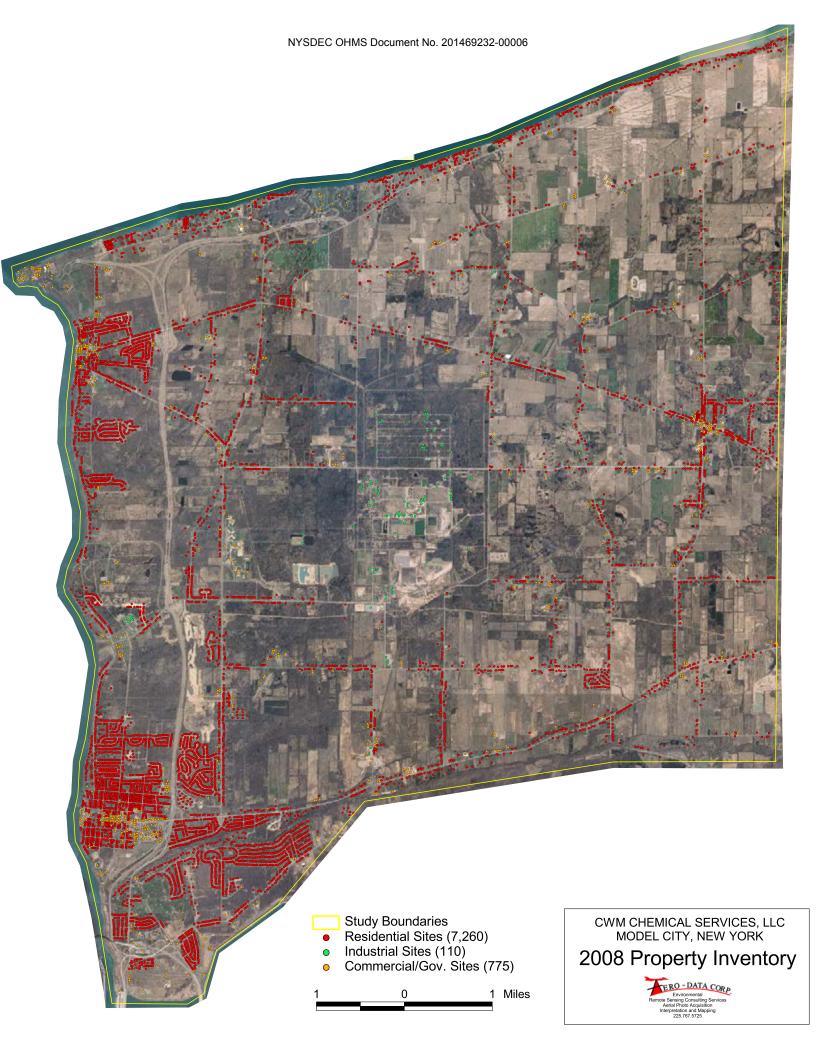
We were contacted by Waste Management and tasked with producing a building count and usage study of the Model City, New York area from the 1960s through the present.

We identified several dates of photography that were available and ultimately selected 6/12/1966 USDA stereoscopic film (scans) and 4/1/2008 USGS digital orthophotos to perform our analysis. We also acquired 2011 parcel data from Niagara County Real Property Tax Services to assist in the distinction between commercial property and residential property.

All the acquired data sources were imported into a geographic information system (GIS) that allowed our photo-analysts to view the data in the same world coordinate system. The photo-analyst used the GIS and observed key features such as parking areas, building size and construction, property usage, and proximity to determine the class of each property. Each property was ultimately classified as Residential, Government/Commercial, or Industrial.

Hardcopy layouts of the imagery with dots indicating the class of each property are included with this narrative.





Appendix P

New York SHPO Findings Letter dated June 29, 2012



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

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.

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

Date:

June 22, 2012

Contact:

Todd J. Farmen

Phone:

585.662.4028

Email:

todd.farmen@arcadis-us.com

Our ref:

B0023725.2011

Mr. Robert Englert June 22, 2012

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 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 su	ubmitted project.	If you have checked this box a	
PROJECT NUMBERPF	R L	Review (PR) number assigned continue unless any of the requestions changed.	d by this office you do not need to quired information below has
COUNTY		ordinges.	
	checked this box you will need to NLL of the following information.		
Project Name			
LocationYou MUST include street numb	per, street name and/or County, State or	or Interstate route number if a	pplicable
City/Town/Village List the correct municipality in which your project	iect is heing undertaken. If in a hamlet	vou must also provide the na	ame of the town.
	communities/counties please attach a lis		
TYPE OF REVIEW REQUIRED/REQ	UESTED (Please answer both c	questions)	
A. Does this action involve a permit approval or func No Yes If Yes, list agency name(s) and permit(s)/approval		er governmental agency?	
Agency involved	Type of permit/approval		State Federal
			_
			_ 🗆 🗆
B. Have you consulted the NYSHPO web site at **ht to determine the preliminary presence or absence resources within or adjacent to the project area?	of previously identified cultural	Yes	☐ No
Was the project site wholly or partially included wi archeologically sensitive area?	ithin an identified	Yes	☐ No
Does the project site involve or is it substantially of for listing in the NY State or National Registers of I		commended Yes	☐ No
CONTACT PERSON FOR PROJECT			
Name	Title		
Firm/Agency			
Firm/Agency			Zip

^{**}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.nv.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 guadrangle maps. **Photographs** Photographs may be black and white prints, color prints, or color laser/photo copies; standard (black

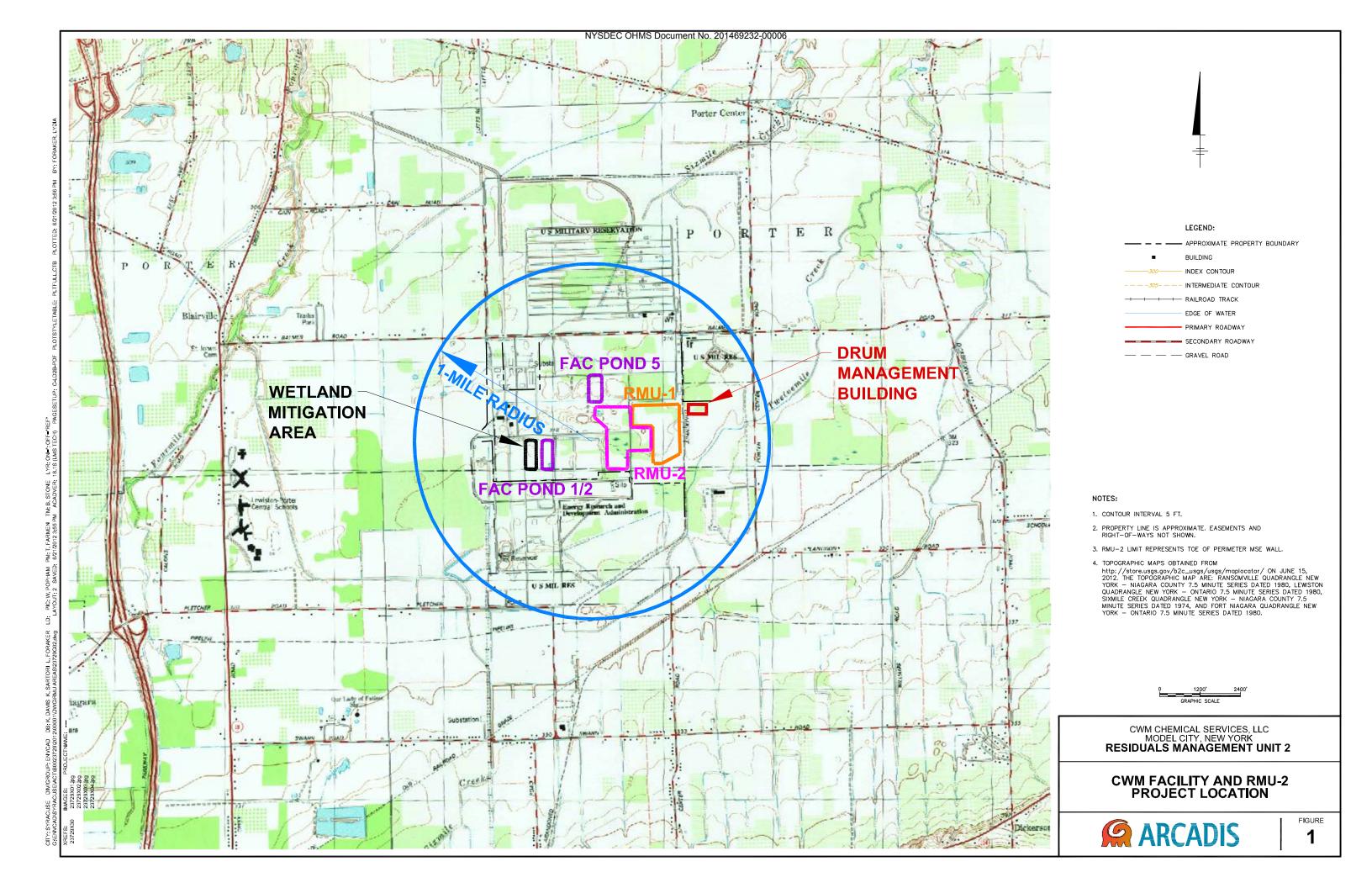
and white) photocopies are NOT acceptable.

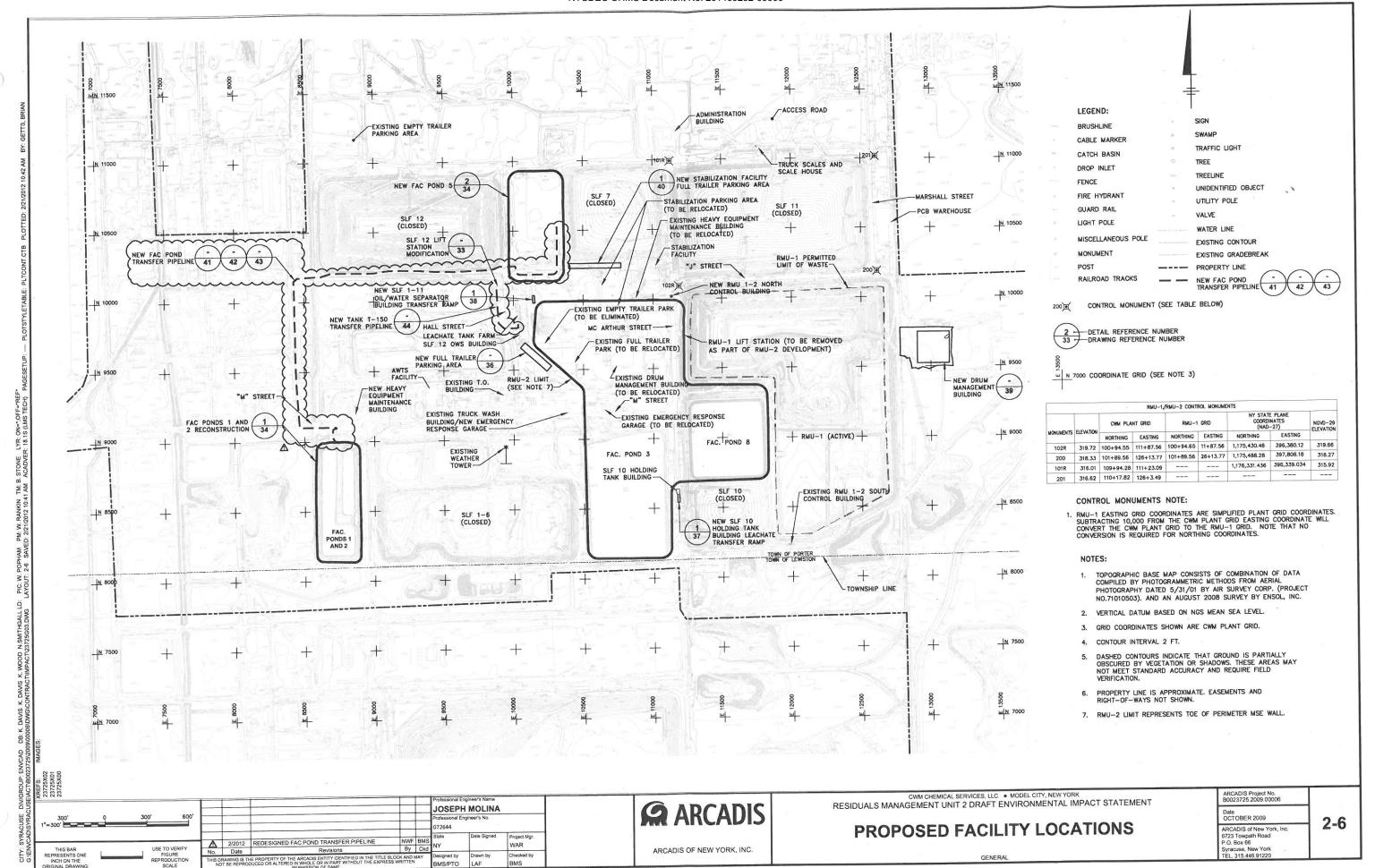
- -If the project involves rehabilitation, include photographs of the building(s) involved. Label each exterior view to a site map and label all interior views.
- -If the project involves new construction, include photographs of the surrounding area looking out from the project site. Include photographs 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





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



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



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



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

ATTACHMENT 3 RMU-2 DEIS SECTIONS

Residuals Management Unit 2 Draft Environmental Impact Statement

April 2003 Revised August 2009 Revised March 2012

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:

- Conversion of land that is presently comprised of existing storage, parking facilities and roads to an SLF.
- Restrictions upon future land use in the area used for RMU-2.
- 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.
- 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.

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- 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.
- 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.
- 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.
- 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:

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

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- On-site treatment of leachate before discharge pursuant to the Model City Facility State Pollutant Discharge Elimination System (SPDES) Permit.
- Modification and maintenance of surface drainage in order to minimize infiltration and erosion.
- Protection of berm slopes in order to minimize erosion.
- 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.
- Use of equipment and continuation of operating procedures that will limit noise to acceptable levels.
- Continued provision of emergency response equipment and trained emergency response personnel.
- Continued patrol and surveillance of the unit by Model City Facility security personnel.
- 12. Protection and upkeep of final cover vegetation to minimize erosion.
- Review of all waste streams per Model City facility's Waste Analysis Plan (WAP).
- Pretreatment of selected waste streams prior to land disposal to meet USEPA and NYSDEC LDR criteria.
- Federal wetland mitigation as determined by the United States, Department of the Army, Buffalo District, Corps of Engineers (USACE).
- Stormwater runoff management.
- Implementation of a post-closure plan for perpetual care that will ensure that the adequate funds for future maintenance and monitoring are available and

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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.

 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:

- No action.
- 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

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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.

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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

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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.

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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

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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

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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.

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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.

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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.

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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	х	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	х	x	×
	Cultural	Cropland/row crops	Agricultural field planted in row crops.	Plants: Corn.	5/5		х	х
		Cropland/field crops	Agricultural field planted in field crops & rotated to pasture.	Plants: Alfalfa, Timothy	5/5		x	х
		Orchard	Stand of cultivated fruit trees.	Plants: Apple Trees	5/5			х
		Mowed lawn	Residential, recreational, or commercial land dominated by clipped grasses with tree cover less than 30%.	Plants: Grass Animals: Robin	5/5		×	×
		Mowed lawn with trees	Same as mowed lawn but with tree cover greater than 30%.	Same as Mowed Lawn.	5/5		х	х
		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	×
		Unpaved road/path	Sparsely vegetated road or pathway of gravel, soil, or bedrock outcrop.	Plants: Gray Dogwood, Grasses	5/5	×	×	x
		Paved road	Road or pathway paved with rock, cement, asphalt, etc.		5/5	×	х	

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

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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, surfacewater 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

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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.

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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



Andrew M. Cuomo Governor

> Rose Harvey Commissioner

New York State Office of Parks, Recreation and Historic Preservation

Historic Preservation Field Services Bureau • Peebles Island, PO Box 189, Waterford, New York 12188-0189
518-237-8643
June 29, 2012
www.nysparks.com

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

Deputy Commissioner for Historic Preservation

Buth & Rupont