Appendix E

WETLAND DELINEATION REPORT

City Gate
(Iola Campus Redevelopment)

City of Rochester
Monroe County, New York

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INTRODUCTION

At the request of Bergman Associates, for A.J. Costello & Son Development, LLC, Environmental Resources, L.L.C., (ERS), undertook a study to delineate and describe the Waters of the United States that occur on a 50+/- acre parcel of land, the majority of which is developed, located southeast of the intersection of East Henrietta Road and Westfall Road, Town of Brighton, Monroe County, New York (see Appendix A—Figure 1). Waters of the United States, as defined by the United States Army Corps of Engineers (USACE), include all lakes, ponds, rivers, streams (intermittent and perennial), and non-isolated wetlands. Wetlands as referenced in this report are defined in Section 404 of the *Clean Water Act* as, "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support a prevalence of vegetation typically adapted for life in saturated soil conditions". This report describes the Waters of the United States delineated within the study area and the methodology used in making the boundary determinations. It provides the information necessary to identify all on-site Waters of the United States and can be used to support any subsequent permit applications that may be submitted to the USACE (Buffalo District) and New York State Department of Environmental Conservation (NYSDEC) (Region 8).

SITE DESCRIPTION

The majority of the project site consists of developments associated with the former Monroe County Iola Campus. The focus of this investigation is the largely undeveloped eastern third of the property known as City Gate, which consists of approximately 15 acres. The study area is bounded by the existing Iola Campus to the west, an office campus and undeveloped lands to the east, Westfall Road to the north, and the Erie Canal and Interstate 590 to the south.

The undeveloped portion of the project site appears to have been utilized as a storage area for maintenance equipment and construction materials. Although no buildings are currently present, evidence of past disturbance includes extensive fills resulting from parking areas, driveways, and disposal, construction and demolition of buildings, and storage of construction materials. As such, the vegetation communities currently characterizing this area are consistent with successional old-field and forest "pioneer" communities typical of disturbed sites. In addition, poor grading during these disturbance activities have altered hydrology and resulted in several pockets of standing water, which now exhibit wetland character.

RESOURCE INFORMATION

To determine the possibility of wetlands occurring within the study area, the following background information was collected and reviewed.

United States Geologic Survey (USGS 7.5 Minute) Topographic Map
The project site is located within the Pittsford, New York Quadrangle Map (Figure 1). This map shows approximately 35+/- feet of relief across the entire site, with an overall southeast aspect. With the exception of the Erie Canal along the south side of the site, no additional watercourses are mapped.

United States Fish and Wildlife Service National Wetlands Inventory (NWI) Map
The NWI map does not indicate there to be any suspected wetlands within the study area. (Figure 2).

NYS Freshwater Wetland Map
As shown in Figure 3, no NYSDEC wetlands are suspected to be present on or adjacent to the site.

Monroe County Soil Survey
A review of the Monroe County Soil Survey (USDA, March 1973) indicates an intermittent drainage way across the south end of the site. Mapped soil types are described below and shown in Figure 4.

- ApA---Appleton loam, 0 to 3 percent slopes---this is a deep, medium-texture soil formed in calcareous glacial till. This somewhat poorly drained soil is in nearly level areas where runoff is slow or in slight depressions that receive runoff. The water table is at a depth of 6 to 12 inches if the area is undrained. In dry periods, it drops below 20 inches. The substratum is slowly permeable. This soil series is mapped in the northeast corner of the site.
- HlB—Hilton loam, 3 to 8 percent slopes, deep, moderately well drained medium and moderately coarse textured soils formed in calcareous glacial till. This soil occupies foot slopes on drumlins and side slopes of low ridges on till plains. These soils are mapped to dominate the north and central portions of the site.
- Ng – Niagara silt loam, 0 to 2 percent slopes, deep, somewhat poorly drained soils having a medium-textured surface layer and a medium to moderately fine textured subsoil. This soil series occupies intermediate landscape positions between high knobs and low depressions in old glacial lakebeds. The Niagara series is mapped in the central and south end of the study area.
- SeB – Schoharie silt loam, 2 to 6 percent slopes, deep, moderately well drained to well drained soils having a medium textured or moderately fine textured surface layer, and a fine to moderately fine textured subsoil. SeB soils occur on the sides of higher knolls in old glacial lakebeds. This soil series is mapped in the central portion of the study area.

The USDA Natural Resource Conservation Service (USDA SCS, 1989) has determined the Appleton and Niagara series to have the potential for hydric inclusions, and the Hilton and Schoharie series to be non-hydric.

WETLAND DELINEATION METHODOLGY

A wetland delineation including detailed data collection and boundary identification was performed on January 7, 2008 (in the absence of snow cover), by wetlands ecologist Gene Pellett and wildlife biologist John Hauber. During the field investigation, the boundaries of all wetlands within the study area were flagged using surveyor's ribbon or specifically noted on appropriate mapping. Data was collected from a thorough assessment of the property; particular attention was given to suspected hydric and potentially hydric soils.

Wetlands on site were delineated according to the methodology described in the *1987 Corps of Engineers Wetland Delineation Manual* (hereafter referred to as the *1987 Manual*) (Environmental Laboratory, 1987). Observations of vegetation, soils and hydrologic conditions were used to determine the boundaries of federally and state regulated wetlands. Data sheets were completed for the sample plots, including verifying upland points, and are presented in Appendix B. Representative photographs were taken of the wetland, as well as adjacent uplands, and are presented in Appendix C (the locations of the photographs are indicated in Appendix A, Figure 5).

Vegetation data collection focused on dominant plant species in four categories: trees (>3" DBH), sapling/shrubs (<3.2' tall), woody vines, and herbs (<3.2' tall). Dominance was measured by visually estimating those species having the largest relative basal area (trees), greatest density (saplings/shrubs), greatest number of stems (woody vines), and greatest percentage of aerial coverage (herbs) by species. The species were rank-ordered for each category by decreasing value of percent cover. The dominant species for each category are defined as those plants with the highest ranking which, when cumulatively totaled, exceed 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 indicator status for each species was determined by reference to the *National List of Plant Species that Occur in Wetlands: Northeast (Region 1)* (Reed, 1988), or by reference to species habitat descriptions from various botanical sources for those species not on the national list. Scientific nomenclature for plant species follows that in *A Checklist of New York State Plants* (Mitchell, 1986). A sampling plot was determined to have wetland vegetation if 50 percent or more of all dominate plant species are of facultative (FAC), facultative wetland (FACW), or obligate (OBL) indicator status, as described in the *1987 Manual*.

Soils information was collected using a Dutch soil auger. Information concerning soil series, subgroup, drainage classification, texture, and matrix and mottle color was obtained at each sample location. Soil color was determined using *Munsell Soil Color Charts* (Kollmorgen Corp., 1992).

Hydrologic characteristics (inundation and soil saturation) were visually assessed to a depth of sixteen inches. The 1987 Corps Manual lists the following indicators as evidence of wetland hydrology: (1) visual observation of inundation, (2) visual observation of soil saturation, (3) watermarks, (4) drift lines, (5) sediment deposits, (6) absence of leaf litter, (7) encrusted detritus, and (8) drainage patterns. Based on professional judgment, the following additional indicators were also used as evidence of wetland hydrology: (1) water-stained leaves, and (2) oxidized rhizospheres.

INSTRUMENT SURVEY

An instrument survey of the delineated wetland boundaries was completed by Bergman Associates on January 25, 2008, and is shown in Figure 5.

RESULTS AND DISCUSSION

Four small areas exhibiting wetland criteria as described in the *1987 Manual* occur on the project site and total 0.30± acres. (Appendix A, Figure 5). A discussion of these wetlands, site uplands, and their characteristics follows.

Wetland A

Wetland A is a channelized intermittent stream corridor occurring in the southeast corner of the study area. (*Photo 1*). This 0.12 acre (495± linear feet) channel occurs in mapped Niagara soils, collecting surface water runoff from surrounding uplands and conveying them easterly into a broad off-site cattail *(Typha angustifolia-OBL)* marsh (Photo 2). The streambed is approximately 24-inches wide and occurs 8'-10' below the surrounding landscape of apparent fill. There is no vegetation within the streambed.

Wetland B

The majority of this wetland is found off-site beyond the study area's east property line. (Photo 3). On-site straddling the east property line, Wetland B is a 0.07-acre emergent marsh that occurs at the base of obvious on-site fill. Resulting from apparent excavation, Wetland B is dominated by cattail and common reed (*Phragmites australis-FACW*). Underlying soils have a matrix color of 10YR4/2 (dark grayish brown) with common high chroma mottles to a depth of 12-inches.

Indicators of wetland hydrology include surface inundation, saturated soils, watermarks, and water-stained leaves.

Adjacent Uplands

Adjacent uplands south of Wetland A are characterized as a successional "pioneer" community, established on past fills, consisting of mounded un-consolidated soils, asphalt, concrete, and rubble. Dominant vegetation includes eastern cottonwood *(Populus deltoids-FAC)* and box elder trees, honeysuckle *(Lonicera tatarica-FACU)* shrubs, summer grape *(Vitis aestivalis-FACU)* vines, and white avens *(Geum canadense-FACU)* on the ground plain. (Photo 4).

Adjacent uplands north of Wetland A and west of Wetland B consist of gravel parking lot (abandoned) fills with sporadic areas of opportunistic common reed and mugwort *(Altisima vulgaris-UPL)*, typical of such disturbed sites. (Photo 5). These upland areas have no soil profile and lack indicators of wetland hydrology.

Wetland C

Wetland C is a 0.09-acre surface water depressional wetland that occurs in a hedgerow along the west boundary line of the project site. (Photo 6). It appears to have been created in a low area between developments to the west (Iola Campus) and the terminus of extensive fill on this study area, and exhibits no outflow. Hydrologic input is primarily piped stormwater, directed from those developments to the west, evidenced by surface inundation (20+ inches), saturated soils, watermarks, and water-stained leaves. Dominant vegetation is monotypic, common reed. Underlying hydric soils have a matrix color of 10YR4/2, with high chroma mottles to a depth of 8-inches.

Wetland D

Wetland D is a small (0.05-acre) isolated, surface water depressional wetland that has developed at the base of elevated fill as a result of poor grading during past earth moving activities. (Photo 7). Underlying soils consist of exposed subsoils having a matrix color of 10YR4/2 with high chroma mottles to a depth of 6-inches, beyond which is solid fill. Dominant vegetation is consistent with moist disturbed areas and is entirely common reed. This isolated wetland receives surface water runoff from surrounding elevated uplands and exhibits no evidence of outflow. Indicators of wetland hydrology include surface inundation (8-inches) and saturated soils.

Adjacent Uplands

Site uplands adjacent to Wetland C consist of 12'-18' of fill material, whose boundary to the wetland is abrupt. (Photo 8). Dominant vegetation consists entirely of upland grasses and forbs including garlic mustard *(Alliara petiolata-FACU),* mugwort, Queen Ann's lace *(Daucus carota-FACU),* teasel *(Dipsicus sylvestris-FACU),* and others.

The above-described uplands are also characteristic of those adjacent to Wetland D, although the depth of fill is not as great.

Other Site Uplands

Pockets of common reed are widespread across the study area, as this opportunistic species is taking full advantage of the disturbed nature of the project site and is not un-common to be found in upland areas. (Photo 9). Where found, the soil substrate is non-hydric and typically consists of three or four inches of topsoil or exposed cinder fills. Although substrate moisture is apparent, these areas do not exhibit indicators of wetland hydrology.

The site's final distinct upland community is a successional forest area at the north end, consisting box elder trees, honeysuckle shrubs, and white avens on the ground plain. (Photo 10). This community appears to have become established on historic fills, and exhibits no evidence of wetland hydrology.

WETLAND FUNCTIONS AND BENEFITS

Activities affecting wetlands have been regulated because these areas can provide various functions and benefits, including 1) natural products for human use, 2) habitat for fish and wildlife, 3) habitat for rare plant and animal species, 4) opportunities for recreation, education, and aesthetic appreciation, 5) flood protection, 6) water quality improvement, 7) shoreline erosion control, and 8) groundwater recharge and discharge. The functions and benefits provided by this property's wetlands are limited based on their isolated landscape position and colonization by low value vegetation (common reed). Benefits may include stormwater collection and wildlife habitat, primarily for breeding amphibians that may occupy the site. No threatened or endangered species (flora or fauna) were observed.

CONCLUSIONS

Based on our review of existing data and field conditions, it was determined that four wetland areas totaling 0.30+/- acres occur on the project site. These wetlands have developed in small pockets on a disturbed landscape. Upland portions of the study area exhibit evidence of historic fill material, and are sparsely vegetated with opportunistic species typical of disturbed sites.

It is our professional opinion that Wetlands A and B are interstate waterways regulated by Section 404 of the *Clean Water Act*. Further, Wetlands C and D exhibit no evidence of outflow or ecological continuum to navigable waters and are not so regulated. However, the USACE makes the final jurisdictional determination based on their site visit and review of historical maps and aerial photographs.

REGULATORY GUIDANCE

The discharge of fill material into jurisdictional wetland areas, as determined by USACE, resulting in the loss of <0.10 acres will likely qualify for Nationwide Permit 18 (NWP 18) requiring pre-construction notification to USACE, with no compensatory mitigation requirement. Wetland fills between 0.10 and 0.50 acres should qualify for NWP 39, requiring pre-construction notification to USACE, including plans for compensatory wetland mitigation.

LITERATURE CITED

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

Gleason, H.A. and A. Cronquist. 1963 *Manual of Vascular Plants of Northeastern United States and Adjacent Cananda.* D. Van Nostrand Co., New York, NY.

Hitchcock, A.S. 1971. *Manual of the Grasses of the United States.* Dover Publications, New York, NY (Two Vols.).

Kollmorgen Corporation. 1992. *Munsell Soil Color Charts.* Macbeth Division of Kollmorgen Corporation, Baltimore, MD.

Mitchell, R.S. 1986. *A Checklist of New York State Plants.* The University of the State of New York, Albany, NY.

Newcomb, L. 1977. *Newcomb's Wildflower Guide.* Little, Brown and Co., Boston, MA.

Peterson, R.T. and M. McKenny. 1968. *A Field Guide to Wildflowers of Northeastern and North Central North America.* Houghton Mifflin Co., Boston, MA.

Reed. P.B., Jr. 1986. *Wetland Plants of the State of New York.* U.S. Fish and Wildlife Service, St. Petersburg, FL.

Reed, P.B., Jr. 1988. *National List of Plant Species That Occur in Wetlands: Northeast (Region 1).* U.S. Fish and Wildlife Service Biological Report 88 (26.1). St. Petersburg, FL.

USDA SCS. 1973. *Soil Survey of Monroe County, New York.* USDA Soil Conservation Service in Cooperation with Cornell University Agricultural Experiment Station.

USDA SCS. 1989. *Hydric Soils of the State of New York.* USDA Soil Conservation Service in Cooperation with National Technical Committee for Hydric Soils, Washington, DC.

APPENDIX A
Figures