

**Approved JD under No. 2006-01224 and  
issued June 11, 2014**



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

REPLY TO  
ATTENTION OF:

June 11, 2014

Regulatory Branch

SUBJECT: Jurisdictional Determination No. 2006-01224

Russell Rutkowski  
Monroe County Dept. of Environmental Services  
City Place  
50 West Main St, Suite 7100  
Rochester, New York 14614-1228

Dear Mr. Ruthowski:

I am writing to you in regard to the recent wetland delineation report submitted on your behalf by Mrs. Johanna Duffy of Barton & Loguidice for a jurisdictional determination for the proposed Mill Seat Landfill Expansion area located along O'Brien and Bovee (Mahar Property) Roads, Town of Riga, Monroe 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 October 2013. This verification was confirmed on November 15, 2013 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 United States Department of Agriculture (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.

Regulatory Branch

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Based upon my review of the submitted delineation and on-site observations, I have determined that wetland areas D (34.97 acres), RG-6 (13.46 acres) & RG-7 (2.47 acres) and Tributary 1 (1,500 linear feet) 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 (JD) form. Therefore, the wetland(s) is/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 this/these area(s).

In addition, I have determined that there is no clear surface water connection or ecological continuum between wetland areas A1, B1, C1 & E1 (Total = 0.68 acres) 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 JD for the subject parcel. If you object to this JD, 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 JD, 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:

Attn: Appeal Review Officer  
Great Lakes and Ohio River Division  
CELRD-PDS-O  
550 Main Street, Room 10524  
Cincinnati, OH 45202-3222  
Phone: 513-684-6212; FAX 513-684-2460

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 August 12, 2014.

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 has been sent to Mrs. Johanna Duffy of Barton and Loguidice.

Regulatory Branch

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Questions pertaining to this matter should be directed to me by calling 716-879-4279, by writing to the following address: U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207, or by e-mail at: [joseph.m.rowley@usace.army.mil](mailto:joseph.m.rowley@usace.army.mil)

Sincerely,



Joseph Rowley  
Physical Scientist

Enclosures

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND  
REQUEST FOR APPEAL**

Applicant: Monroe County Dept of Environmental Services		File Number: 2006-01224	Date: June 11, 2014
Attached is:			See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
	PROFFERED PERMIT (Standard Permit or Letter of permission)		B
	PERMIT DENIAL		C
X	APPROVED JURISDICTIONAL DETERMINATION		D
	PRELIMINARY JURISDICTIONAL DETERMINATION		E

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

- A: INITIAL PROFFERED PERMIT:** You may accept or object to the permit.
- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
  - **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.
- B: PROFFERED PERMIT:** You may accept or appeal the permit
- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
  - **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.
- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
  - **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- E: PRELIMINARY JURISDICTIONAL DETERMINATION:** You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

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

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

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

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

<p>If you have questions regarding this decision and/or the appeal process you may contact:</p> <p>Joseph Rowley United States Army Corps of Engineers Buffalo District 1776 Niagara Street Buffalo, NY 14207 716-879-4279 joseph.m.rowley@usace.army.mil</p>	<p>If you only have questions regarding the appeal process you may also contact:</p> <p>Attn: Appeal Review Officer Great Lakes and Ohio River Division CELRD-PD-REG 550 Main Street, Room 10524 Cincinnati, OH 45202-3222 513-684-6212; FAX 513-684-2460</p>
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**RIGHT OF ENTRY:** Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

<p>_____ Signature of appellant or agent.</p>	<p>Date:</p>	<p>Telephone number:</p>
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**APPROVED JURISDICTIONAL DETERMINATION FORM**  
**U.S. Army Corps of Engineers**

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

**SECTION I: BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):** June 10, 2014

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:** LRB 2006-01224 (Monroe County-Mill St Landfill)

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: New York County/parish/borough: Monroe City: Riga  
Center coordinates of site (lat/long in degree decimal format): Lat. 43.044 °N, Long. -77.93 °W  
Universal Transverse Mercator: *Click here to enter text.*

Name of nearest waterbody: Tributary 2 of Mill Creek (aka Blue Pond Inlet)  
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Genesee River  
Name of watershed or Hydrologic Unit Code (HUC): 04130003

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

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

- Office (Desk) Determination. Date: April 23, 2014  
 Field Determination. Date(s): November 15, 2013

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

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

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

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There are no "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. *[Required]*

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

- TNWs, including territorial seas  
 Wetlands adjacent to TNWs  
 Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs  
 Non-RPWs that flow directly or indirectly into TNWs  
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs  
 Impoundments of jurisdictional waters  
 Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: # linear feet: # width (ft) and/or # acres.  
Wetlands: 37.44 acres.

**c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual**

Elevation of established OHWM (if known): *Click here to enter text.*

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.  
Explain:

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.



## SECTION III: CWA ANALYSIS

### A. TNWs AND WETLANDS ADJACENT TO TNWs

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

#### 1. TNW

Identify TNW: *Click here to enter text.*

Summarize rationale supporting determination: *Click here to enter text.*

#### 2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": *Click here to enter text.*

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

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

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

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

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

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

##### (i) General Area Conditions:

Watershed size: # *Choose an item.*

Drainage area: # *Choose an item.*

Average annual rainfall: # inches

Average annual snowfall: # inches

##### (ii) Physical Characteristics:

###### (a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through *Choose an item.* tributaries before entering TNW.

Project waters are *Choose an item.* river miles from TNW.

Project waters are *Choose an item.* river miles from RPW.

Project waters are *Choose an item.* aerial (straight) miles from TNW.

Project waters are *Choose an item.* aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: *Click here to enter text.*

Identify flow route to TNW<sup>5</sup>: *Click here to enter text.*

Tributary stream order, if known: *Click here to enter text.*

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

Tributary is:  Natural

Artificial (man-made). Explain: *Click here to enter text.*

Manipulated (man-altered). Explain: *Click here to enter text.*

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

**Tributary properties with respect to top of bank (estimate):**

Average width: # feet

Average depth: # feet

Average side slopes: *Choose an item.*

**Primary tributary substrate composition (check all that apply):**

- Silts                       Sands                       Concrete  
 Cobbles                       Gravel                       Muck  
 Bedrock                       Vegetation. Type/% cover: *Click here to enter text.*  
 Other. Explain: *Click here to enter text.*

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: *Click here to enter text.*

Presence of run/riffle/pool complexes. Explain: *Click here to enter text.*

Tributary geometry: *Choose an item.*

Tributary gradient (approximate average slope): #%

**(c) Flow:**

Tributary provides for: *Choose an item.*

Estimate average number of flow events in review area/year: *Choose an item.*

Describe flow regime: *Click here to enter text.*

Other information on duration and volume: *Click here to enter text.*

Surface flow is: *Choose an item.* Characteristics: *Click here to enter text.*

Subsurface flow: *Choose an item.* Explain findings: *Click here to enter text.*

Dye (or other) test performed: *Click here to enter text.*

**Tributary has (check all that apply):**

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

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

- High Tide Line indicated by:                       Mean High Water Mark indicated by:  
 oil or scum line along shore objects                       survey to available datum;  
 fine shell or debris deposits (foreshore)                       physical markings;  
 physical markings/characteristics                       vegetation lines/changes in vegetation types.  
 tidal gauges  
 other (list): *Click here to enter text.*

**(iii) Chemical Characteristics:**

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

Explain: *Click here to enter text.*

Identify specific pollutants, if known: *Click here to enter text.*

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

<sup>7</sup>Ibid.

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

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

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

**(i) Physical Characteristics:**

**(a) General Wetland Characteristics:**

Properties:

Wetland size: # acres

Wetland type. Explain: *Click here to enter text.*

Wetland quality. Explain: *Click here to enter text.*

Project wetlands cross or serve as state boundaries. Explain: *Click here to enter text.*

**(b) General Flow Relationship with Non-TNW:**

Flow is: *Choose an item.* Explain: *Click here to enter text.*

Surface flow is: *Choose an item.*

Characteristics: *Click here to enter text.*

Subsurface flow: *Choose an item.* Explain findings: *Click here to enter text.*

Dye (or other) test performed: *Click here to enter text.*

**(c) Wetland Adjacency Determination with Non-TNW:**

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: *Click here to enter text.*

Ecological connection. Explain: *Click here to enter text.*

Separated by berm/barrier. Explain: *Click here to enter text.*

**(d) Proximity (Relationship) to TNW**

Project wetlands are *Choose an item.* river miles from TNW.

Project waters are *Choose an item.* aerial (straight) miles from TNW.

Flow is from: *Choose an item.*

Estimate approximate location of wetland as within the *Choose an item.* floodplain.

**(ii) Chemical Characteristics:**

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

Identify specific pollutants, if known: *Click here to enter text.*

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

Riparian buffer. Characteristics (type, average width): *Click here to enter text.*

Vegetation type/percent cover. Explain: *Click here to enter text.*

Habitat for:

Federally Listed species. Explain findings: *Click here to enter text.*

Fish/spawn areas. Explain findings: *Click here to enter text.*

Other environmentally-sensitive species. Explain findings: *Click here to enter text.*

Aquatic/wildlife diversity. Explain findings: *Click here to enter text.*

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

All wetland(s) being considered in the cumulative analysis: *Choose an item.*

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

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
Y/N	#	Y/N	#
Y/N	#	Y/N	#
Y/N	#	Y/N	#
Y/N	#	Y/N	#

Summarize overall biological, chemical and physical functions being performed: *Click here to enter text.*

### C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: *Click here to enter text.*
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: *Click here to enter text.*
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: *Click here to enter text.*

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

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

TNWs: # linear feet # width (ft), Or, # acres.

Wetlands adjacent to TNWs: # acres.

2. **RPWs that flow directly or indirectly into TNWs.**

Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: *Click here to enter text.*

Tributaries of TNW where tributaries have continuous flow “seasonally” (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: *Click here to enter text.*

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

Tributary waters: # linear feet # width (ft).

Other non-wetland waters: # acres.

Identify type(s) of waters: *Click here to enter text.*

3. **Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

Tributary waters: # linear feet # width (ft).

Other non-wetland waters: # acres.

Identify type(s) of waters: *Click here to enter text.*

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

<sup>8</sup>See Footnote # 3.

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Wetland D(RG-33) (34.97 acres) represents the headwater wetlands of an unnamed tributary to Mill Creek (also known as Blue Pond Inlet). Also, Wetland D(RG-33) is a mapped, NYSDEC regulated wetland. The wetland continues to the southeast beyond the limits of the delineated parcel. Based on a review of the NYSDEC's Environmental Resource Mapper and aerial photography, the wetland system continues east towards Route 166, where a mapped stream, an unnamed tributary to Mill Creek, begins. The unnamed tributary to Mill Creek is represented on the Churchville USGS as a solid blue line which indicates perennial flow.

Delineated wetland RG-7 (2.47 acres) is associated with an unnamed Tributary to Hotel Creek, NYSDEC mapped Class C stream and blue line on the USGS Churchville quad. A culvert crosses underneath O'Brien Road within the limits of the delineated parcel/review area. The culvert provides a hydrological connection between wetland RG-7 north and RG-7 south. According to the delineation report, wetland RG-7 that surrounds O'Brien road has been observed to have standing water throughout much of the year. The unnamed tributary to Hotel Creek is located within the delineated limits of wetland RG-7; the wetland represents the headwaters of this tributary.

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

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

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

7. **Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

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

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

**Identify water body and summarize rationale supporting determination:** *Click here to enter text.*

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

- Tributary waters: # linear feet # width (ft).
- Other non-wetland waters: # acres.  
Identify type(s) of waters: *Click here to enter text.*
- Wetlands: # acres.

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

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

<sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

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

Other: (explain, if not covered above): *Click here to enter text.*

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

- Non-wetland waters (i.e., rivers, streams): # linear feet # width (ft).
- Lakes/ponds: # acres.
- Other non-wetland waters: # acres. List type of aquatic resource: *Click here to enter text.*
- Wetlands: # acres.

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

- Non-wetland waters (i.e., rivers, streams): # linear feet # width (ft).
- Lakes/ponds: # acres.
- Other non-wetland waters: # acres. List type of aquatic resource: *Click here to enter text.*
- Wetlands: # acres.

#### **SECTION IV: DATA SOURCES.**

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

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Barton & Loguidice Delineation dated October 2013
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - Office concurs with data sheets/delineation report.
  - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: *Click here to enter text.*
- Corps navigable waters' study: *Click here to enter text.*
- U.S. Geological Survey Hydrologic Atlas: *Click here to enter text.*
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: Churchville Quad, 1:20,000
- USDA Natural Resources Conservation Service Soil Survey. Citation: USDA/NRCS Web Soil Survey
- National wetlands inventory map(s). Cite name: USFWS Wetland Mapper; Mapped Federal wetlands are within the vicinity of the delineated parcel
- State/Local wetland inventory map(s): NYSDEC Environmental Resource Mapper, Multiple NYSDEC regulated are within the vicinity of the delineated parcel
- FEMA/FIRM maps: *Click here to enter text.*
- 100-year Floodplain Elevation is: *Click here to enter text.* (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): Bing/Google Maps
- or  Other (Name & Date): *Click here to enter text.*
- Previous determination(s). File no. and date of response letter: *Click here to enter text.*
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify):

**B. ADDITIONAL COMMENTS TO SUPPORT JD: None**

  
\_\_\_\_\_  
Joseph M. Rowley  
Project Manager

\_\_\_\_\_  
April 30, 2014  
Date



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

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

**SECTION I: BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):**—June 10, 2014

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:** 2006-01224 (Monroe County-Mill St Landfill)

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: New York County/parish/borough: Monroe City: Riga  
Center coordinates of site (lat/long in degree decimal format): Lat. 43.044 °N °, Long. -77.93 °W °  
Universal Transverse Mercator: *Click here to enter text.*

Name of nearest waterbody: Hotel Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Genesee River

Name of watershed or Hydrologic Unit Code (HUC): 04130003

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

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

Office (Desk) Determination. Date: April 23, 2014

Field Determination. Date(s): November 15, 2013

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

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

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

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

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

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):**<sup>1</sup>

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: 1500 linear feet: 4-8 width (ft) and/or 0.46 acres.

Wetlands: 13.46 acres.

**c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual**

Elevation of established OHWM (if known): *Click here to enter text.*

**2. Non-regulated waters/wetlands (check if applicable):**<sup>3</sup>

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.  
Explain: **I conducted a site visit on November 15, 2013 and also reviewed in-house resources including, topographical maps, aerial photography and soils maps. I walked the perimeter of Wetlands A1, B1, C1 & E1 (Total = 0.68 acres) and I did not observe any surface flow or culverts going away from them or any shallow subsurface connections. No ecological nexus to any drainageways were seen in the vicinity of wetlands A1, B1, C1 & E1. Wetland A1, B1, C1 & E1 appear to be only intermittently saturated, vernal pools that may support amphibian species. Wetlands A1, B1, C1 & E1 did not show evidence of standing water (no water marks or**

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least “seasonally” (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.



drift lines) and therefore may not hold water long enough for substantial flood storage. I didn't observe any drainages or flow from Wetlands A1, B1, C1 & E1 into any other the wetland or drainageway. Wetlands A1, B1, C1 & E1 are geographically isolated and therefore are not jurisdictional.

### SECTION III: CWA ANALYSIS

#### A. TNWs AND WETLANDS ADJACENT TO TNWs

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

##### 1. TNW

Identify TNW: *Click here to enter text.*

Summarize rationale supporting determination: *Click here to enter text.*

##### 2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": *Click here to enter text.*

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

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

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

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

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

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

###### (i) General Area Conditions:

Watershed size: # 2,373 square miles (Genesee River Watershed), 202 square miles (Black Creek Watershed)

Drainage area: # slightly over 100 acres

Average annual rainfall: 35 inches

Average annual snowfall: 63 inches

###### (ii) Physical Characteristics:

###### (a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 2 tributaries before entering TNW.

Project waters are 15-20 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 10-15 aerial (straight) miles from TNW.

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

Project waters cross or serve as state boundaries. Explain: No

Identify flow route to TNW<sup>5</sup>: Wetland RG-6 flows south into an unnamed and unmapped drainage (referred to as RG-6's drainage) which empties into Hotel Creek. Hotel Creek is the ninth tributary of Black Creek, which is the 19<sup>th</sup> tributary of the Genesee River, the closet TNW.

Tributary stream order, if known: RG-6's drainage is unmapped but Hotel Creek, where the drainage empties into this waterbody, is a first order stream.

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

Tributary is:  Natural

Artificial (man-made). Explain: *Click here to enter text.*

Manipulated (man-altered). Explain: Channel has been excavated and modified in the past to carry runoff from adjacent agricultural fields and from RG-6 without the risk of flooding the fields themselves.

Tributary properties with respect to top of bank (estimate):

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Average width: 6 feet  
Average depth: 3 feet  
Average side slopes: 2:1 to 3:1

Primary tributary substrate composition (check all that apply):

- |   |   |                                   |
|---|---|-----------------------------------|
| <input type="checkbox"/> Silts  | <input type="checkbox"/> Sands  | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles  | <input type="checkbox"/> Gravel   | <input type="checkbox"/> Muck     |
| <input type="checkbox"/> Bedrock  | <input checked="" type="checkbox"/> Vegetation. Type/% cover: herbaceous and woody vines in channel with shrubs overhanging/ Approximately 80% canopy cover along length of drainage. |                                   |
| <input checked="" type="checkbox"/> Other. Explain: substrate is primarily a clay loam. Limited cobbles/rocks for most of its length. |   |                                   |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: water elevation doesn't get high enough to affect banks. Due to the amount of vegetative cover, banks are fairly stable, despite a consistent 2:1 to 3:1 slope along the channel.

Presence of run/riffle/pool complexes. Explain: absent

Tributary geometry: relatively straight

Tributary gradient (approximate average slope): 30%

(c) Flow:

Tributary provides for: intermittent

Estimate average number of flow events in review area/year: 20 (or greater)

Describe flow regime: Wetland RG-6 and associated drainages rely on area surface runoff and discharge from the landfill site stormwater detention basin for their flow. Groundwater is not a major factor contributing recharge and it is estimated that groundwater discharge accounts for less than 1/2% of the total flow to the wetland with precipitation and runoff providing the primary source of recharge

Other information on duration and volume: *Click here to enter text.*

Surface flow is: confined Characteristics: Surface water flow within RG-6's drainage is confined to a channel for most of its length.

Subsurface flow: Unknown Explain findings: amount of subsurface flow is unknown but estimated to be very limited based on previous hydrogeologic work performed on the landfill site and for the soil borrow area project.

Dye (or other) test performed: *Click here to enter text.*

Tributary has (check all that apply):

Bed and banks

OHWM<sup>6</sup> (check all indicators that apply):

- |   |  |
|---|--|
| <input type="checkbox"/> clear, natural line impressed on the bank          | <input type="checkbox"/> the presence of litter and debris                                 |
| <input type="checkbox"/> changes in the character of soil                   | <input type="checkbox"/> destruction of terrestrial vegetation                             |
| <input type="checkbox"/> shelving   | <input type="checkbox"/> the presence of wrack line  |
| <input checked="" type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting  |
| <input type="checkbox"/> leaf litter disturbed or washed away               | <input type="checkbox"/> scour   |
| <input checked="" type="checkbox"/> sediment deposition                     | <input type="checkbox"/> multiple observed or predicted flow events                        |
| <input checked="" type="checkbox"/> water staining                          | <input type="checkbox"/> abrupt change in plant community <i>Click here to enter text.</i> |
| <input type="checkbox"/> other (list): <i>Click here to enter text.</i>     |  |

Discontinuous OHWM.<sup>7</sup> Explain: *Click here to enter text.*

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

- |   |  |
|---|--|
| <input type="checkbox"/> High Tide Line indicated by:                   | <input type="checkbox"/> Mean High Water Mark indicated by:            |
| <input type="checkbox"/> oil or scum line along shore objects           | <input type="checkbox"/> survey to available datum;                    |
| <input type="checkbox"/> fine shell or debris deposits (foreshore)      | <input type="checkbox"/> physical markings;                            |
| <input type="checkbox"/> physical markings/characteristics              | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges                                   |  |
| <input type="checkbox"/> other (list): <i>Click here to enter text.</i> |  |

(iii) **Chemical Characteristics:**

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

Explain: Water flow within RG-6's drainage is generally clear, sometimes with an organic film on top of the water surface during low flow events or when the water is stagnant within the channel.

Identify specific pollutants, if known: No known pollutants

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

Riparian corridor. Characteristics (type, average width): woody shrubs and saplings line the channel on both sides with a variety of herbaceous vegetation along the bed and/or banks of the stream.

Wetland fringe. Characteristics: *Click here to enter text*

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

<sup>7</sup>Ibid.

- Habitat for:
  - Federally Listed species. Explain findings: *Click here to enter text.*
  - Fish/spawn areas. Explain findings: *Click here to enter text.*
  - Other environmentally-sensitive species. Explain findings: *Click here to enter text.*
  - Aquatic/wildlife diversity. Explain findings: *Click here to enter text.*

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

**(i) Physical Characteristics:**

**(a) General Wetland Characteristics:**

Properties:

Wetland size: 13.46 acres

Wetland type. Explain: Palustrine forested

Wetland quality. Explain: Perched – limited groundwater infiltration reliant on precipitation. Vegetative wetland type is of high quality.

Project wetlands cross or serve as state boundaries. Explain: not applicable

**(b) General Flow Relationship with Non-TNW:**

Flow is: Intermittent Flow Explain: Much of the flow from Wetland RG-6 to its associated drainage is governed by precipitation events but discharges from the stormwater detention basin also contribute surface water to the wetland. Wetland RG-6 discharges to its drainage primarily via a culvert structure (installed to provide access to agricultural field to the west).

Surface flow is: Discrete

Characteristics: Water flow is not visually observed within wetland RG-6 except at the outlet and the stormwater detention basin discharge location. According to the delineation report, surface water has been observed within the wetland throughout much of the year.

Subsurface flow: No Explain findings: Subsurface flow is unknown

Dye (or other) test performed: *Click here to enter text.*

**(c) Wetland Adjacency Determination with Non-TNW:**

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: *Click here to enter text.*

Ecological connection. Explain: *Click here to enter text.*

Separated by berm/barrier. Explain: *Click here to enter text.*

**(d) Proximity (Relationship) to TNW**

Project wetlands are 10-15 river miles from TNW.

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

Flow is from: wetland to navigable waters

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

**(ii) Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Water color is fairly clear. Heavy decomposition of vegetation within the wetland. Organic film on the water surface in some locations. Wetland is at the headwaters of the watershed. Stormwater detention basin and wetland RG-6 help to filter sediments from the surface water that flows to the adjacent non-TNW.

Identify specific pollutants, if known: none are known

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

Riparian buffer. Characteristics (type, average width): *Click here to enter text.*

Vegetation type/percent cover. Explain: Primarily deciduous forest.

Habitat for:

Federally Listed species. Explain findings: *Click here to enter text.*

Fish/spawn areas. Explain findings: *Click here to enter text.*

Other environmentally-sensitive species. Explain findings: *Click here to enter text.*

Aquatic/wildlife diversity. Explain findings: the wetland supports different wildlife species such as forest mammals, birds and amphibians/reptiles.

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

All wetland(s) being considered in the cumulative analysis: 1

Approximately (13.46) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
Wetland RG-6 - Yes	13.46	Y/N	#

Summarize overall biological, chemical and physical functions being performed: A hydrological connection can be traced from wetland RG-6 and its drainage to Hotel Creek then to Black Creek the the Genesee River, a TNW. Wetland RG-6 is primarily forested and a riparian buffer lines the stream resource on both sides throughout its length. Wetland RG-6 and to an extent the drainage remove sediment and other potential pollutants from the surface water before it reaches Hotel Creek.

### C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: *Click here to enter text.*
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

Wetland RG-6 (13.46 acres) occurs entirely within the boundaries of the project site. During the site visit the wetland was in a relatively saturated condition. Flood attenuation/runoff storage, pollutant trapping/water quality, removal of suspended solids, dissolved solids, toxins and retention/treatment of nitrogen and phosphorus, functions are considered to be minimal for the subject wetland. Wildlife habitat functions are considered to be minimal.

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

Moderate appreciable lifecycle support functions, with respect to Genesee River are performed by the non RPW unnamed tributary to Hotel Creek (1500 linear feet) and its adjacent wetland for this relevant reach. There is habitat in the wetland to support aquatic species, amphibians, insects that are also present in the TNW. The wetland provides habitat for local communities of insects, birds, some amphibians and small mammals and avian species. The avian species which likely use this wetland and tributary could be closely associated with use of the TNW.

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

Yes, the non-RPW unnamed tributary to Hotel Creek serves as a primary collector and processor of organic matter and nutrients for downstream waters which includes the TNW, Genesee River. The non-RPW carries nutrients and can transport organic debris to the TNW. The storage and transformation of organic matter is important to these types of systems because it prevents downstream water quality degradation as a result of excess organic matter. The non-RPW also transforms unusable organic matter (inorganic carbon) into food for aquatic organisms (organic carbon) that reside in the TNW

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

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

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

TNWs: # linear feet # width (ft), Or, # acres.

Wetlands adjacent to TNWs: # acres.

2. **RPWs that flow directly or indirectly into TNWs.**

Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: *Click here to enter text.*

Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: *Click here to enter text.*

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

Tributary waters: # linear feet # width (ft).

Other non-wetland waters: # acres.

Identify type(s) of waters: *Click here to enter text.*

3. **Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

Tributary waters: 1500 linear feet 6 width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters: *Click here to enter text.*

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: *Click here to enter text.*

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

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

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: 13.46 acres.

7. **Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

Demonstrate that impoundment was created from "waters of the U.S.," or

Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

Demonstrate that water is isolated with a nexus to commerce (see E below).

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

which are or could be used by interstate or foreign travelers for recreational or other purposes.

from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

which are or could be used for industrial purposes by industries in interstate commerce.

Interstate isolated waters. Explain: *Click here to enter text.*

Other factors. Explain: *Click here to enter text.*

**Identify water body and summarize rationale supporting determination:** *Click here to enter text.*

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

Tributary waters: # linear feet # width (ft).

Other non-wetland waters: # acres.

Identify type(s) of waters: *Click here to enter text.*

Wetlands: # acres.

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

If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

<sup>8</sup>See Footnote # 3.

<sup>9</sup>To complete the analysis refer to the key in Section III D.6 of the Instructional Guidebook.

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

- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: *Click here to enter text*
- Other: (explain, if not covered above): *Click here to enter text*.

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

- Non-wetland waters (i.e., rivers, streams): # linear feet # width (ft).
- Lakes/ponds: # acres.
- Other non-wetland waters: # acres. List type of aquatic resource: *Click here to enter text*.
- Wetlands: 0.68 acres.

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

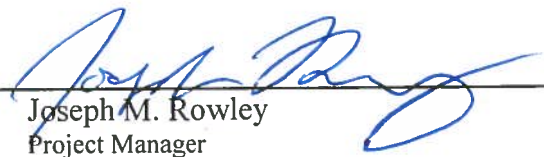
- Non-wetland waters (i.e., rivers, streams): # linear feet # width (ft).
- Lakes/ponds: # acres.
- Other non-wetland waters: # acres. List type of aquatic resource:
- Wetlands: 0.68 acres.

#### **SECTION IV: DATA SOURCES.**

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

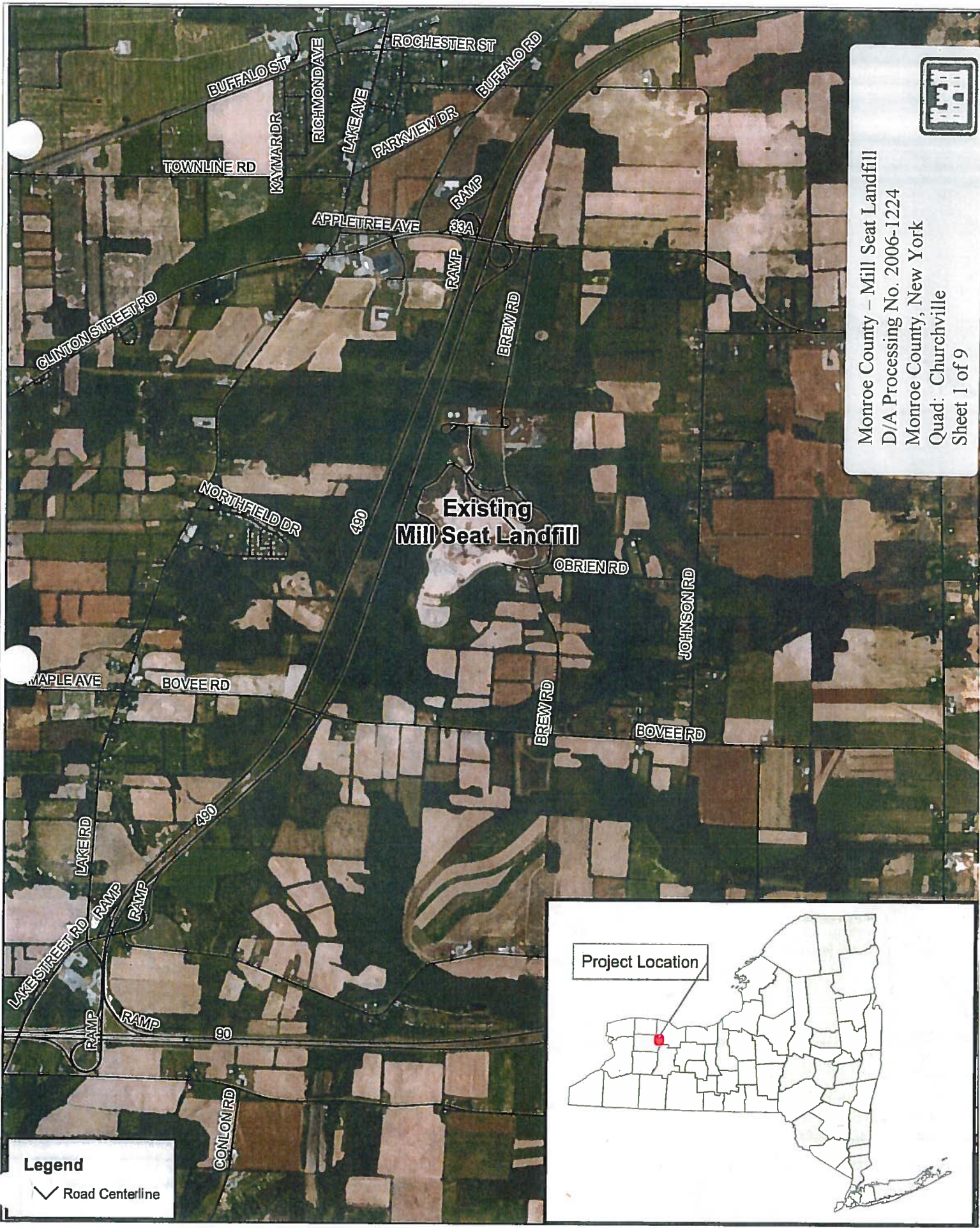
- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Barton & Loguidice Delineation dated October 2013
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
- Office concurs with data sheets/delineation report.
- Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: *Click here to enter text*.
- Corps navigable waters' study: *Click here to enter text*.
- U.S. Geological Survey Hydrologic Atlas: *Click here to enter text*.
- USGS NHD data.
- USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: Churchville Quad, 1:20,000
- USDA Natural Resources Conservation Service Soil Survey. Citation: USDA/NRCS Web Soil Survey
- National wetlands inventory map(s). Cite name: USFWS Wetland Mapper; Mapped Federal wetlands are within the vicinity of the delineated parcel
- State/Local wetland inventory map(s): NYSDEC Environmental Resource Mapper, Multiple NYSDEC regulated are within the vicinity of the delineated parcel
- FEMA/FIRM maps: *Click here to enter text*.
- 100-year Floodplain Elevation is: *Click here to enter text*. (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): Bing/Google Maps
- or  Other (Name & Date): *Click here to enter text*.
- Previous determination(s). File no. and date of response letter: *Click here to enter text*.
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify):


**B. ADDITIONAL COMMENTS TO SUPPORT JD:** Isolated wetlands A1, B1, C1 & E1 (Total = 0.68 acres) were field verified by the Corps of Engineers on November 15, 2013. The perimeter of the wetlands were walked and no evidence of any connection to other waters were identified. There were no connections between Wetlands A1, B1, C1 & E1 (Total = 0.68 acres) and any other waters on the Churchville USGS Quad or the USDA/NRCS Web Soil Survey. Wetlands A1, B1, C1 & E1 are isolated and outside the Department of the Army's jurisdiction. The determination is supported by the review of in-house resources and verified from a site visit. None of the 328.3(a)(3)(i-iii) factors are relevant in this case. Wetlands A1, B1, C1 & E1 don't support recreational or other use by interstate travelers, nor do they provide habitat for fish or shellfish. Wetlands A1, B1, C1 & E1 offers no use for industrial or commercial purposes. Wetlands A1, B1, C1 & E1 (Total = 0.68 acres) were determined to be isolated and therefore non-jurisdictional.

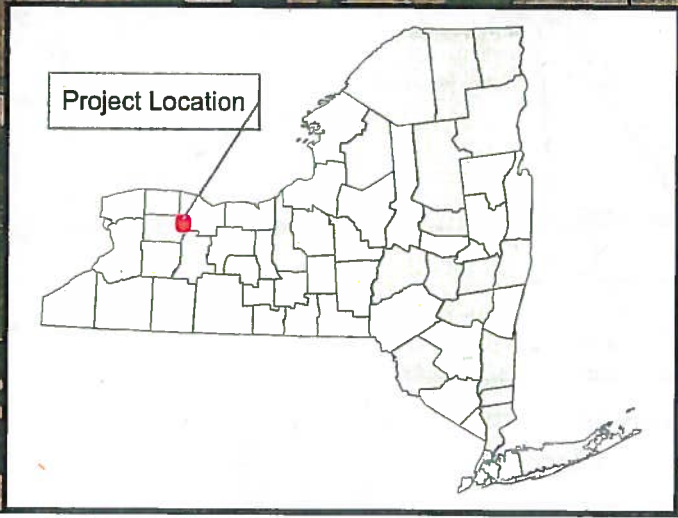
  
 \_\_\_\_\_  
 Joseph M. Rowley  
 Project Manager


April 30, 2014  
 \_\_\_\_\_  
 Date





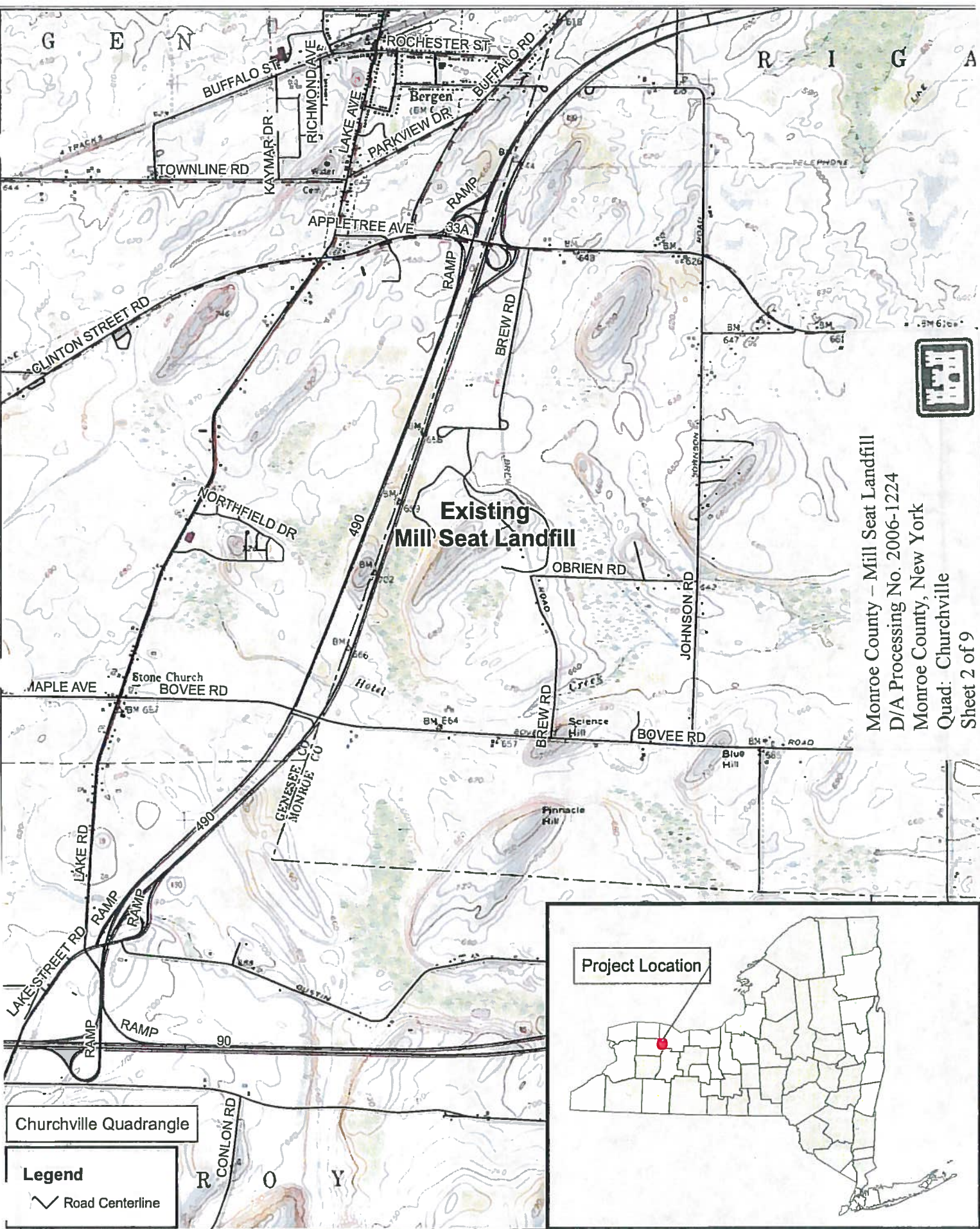
  
 Monroe County – Mill Seat Landfill  
 D/A Processing No. 2006-1224  
 Monroe County, New York  
 Quad: Churchville  
 Sheet 1 of 9



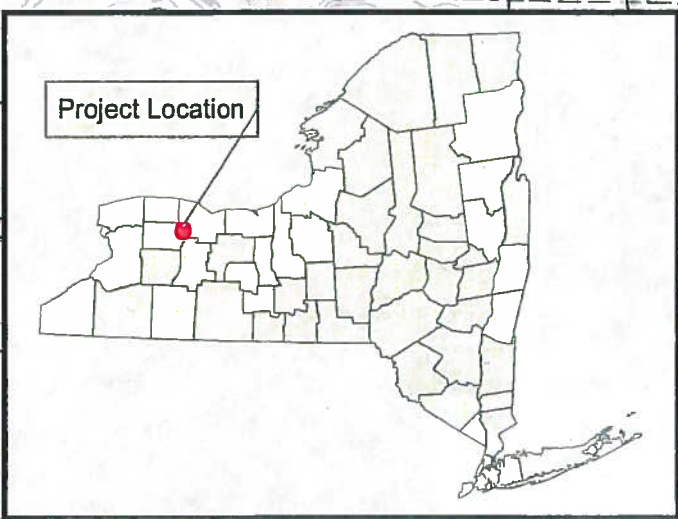
**Legend**  
 Road Centerline







Monroe County – Mill Seat Landfill  
 D/A Processing No. 2006-1224  
 Monroe County, New York  
 Quad: Churchville  
 Sheet 2 of 9



Churchville Quadrangle

**Legend**  
 Road Centerline



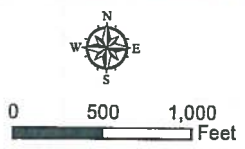
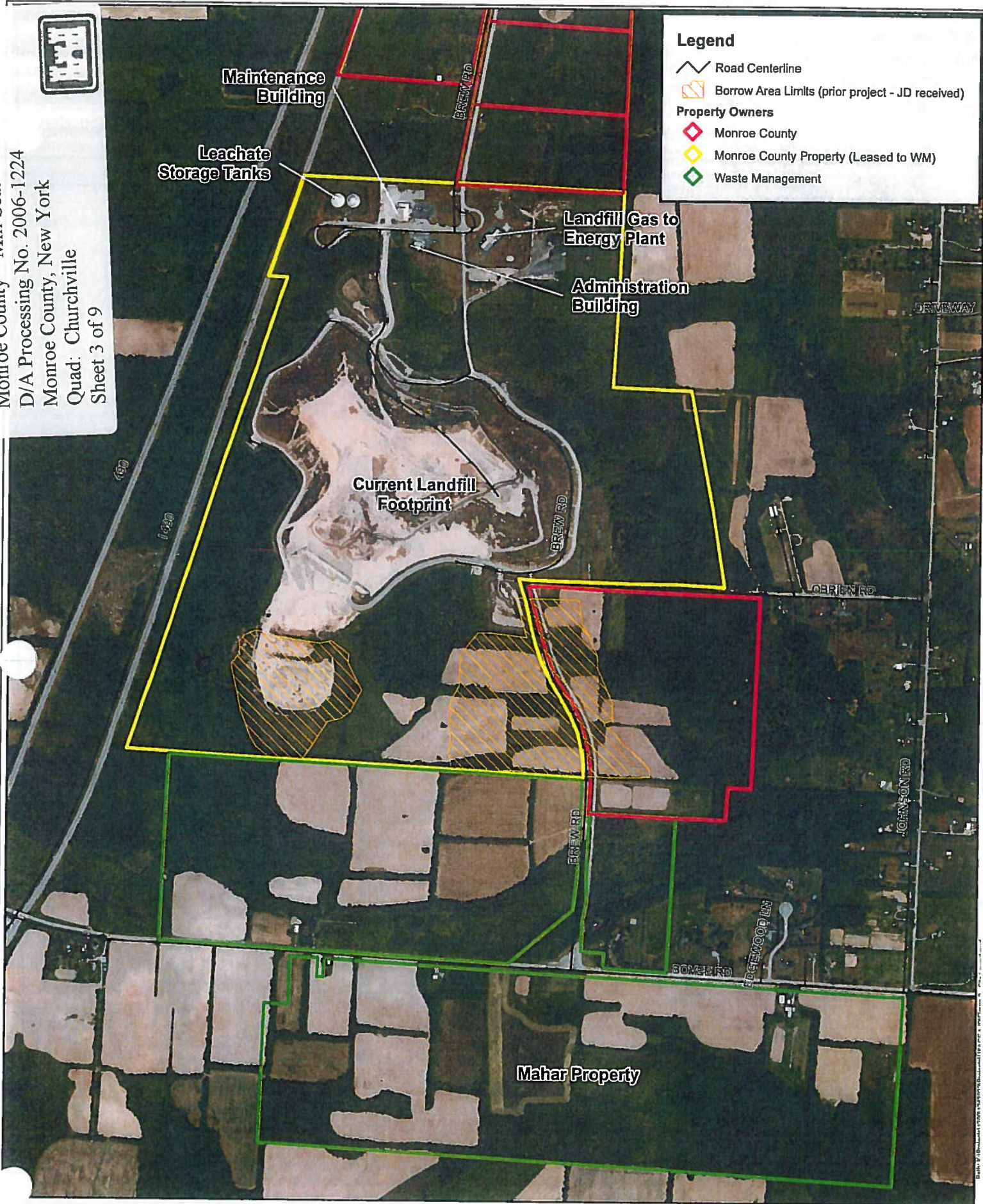
0 2,000 4,000 Feet

Monroe County – Mill Seat Landfill  
 D/A Processing No. 2006-1224  
 Monroe County, New York  
 Quad: Churchville  
 Sheet 3 of 9



**Legend**

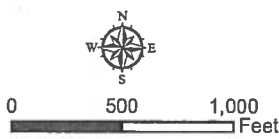
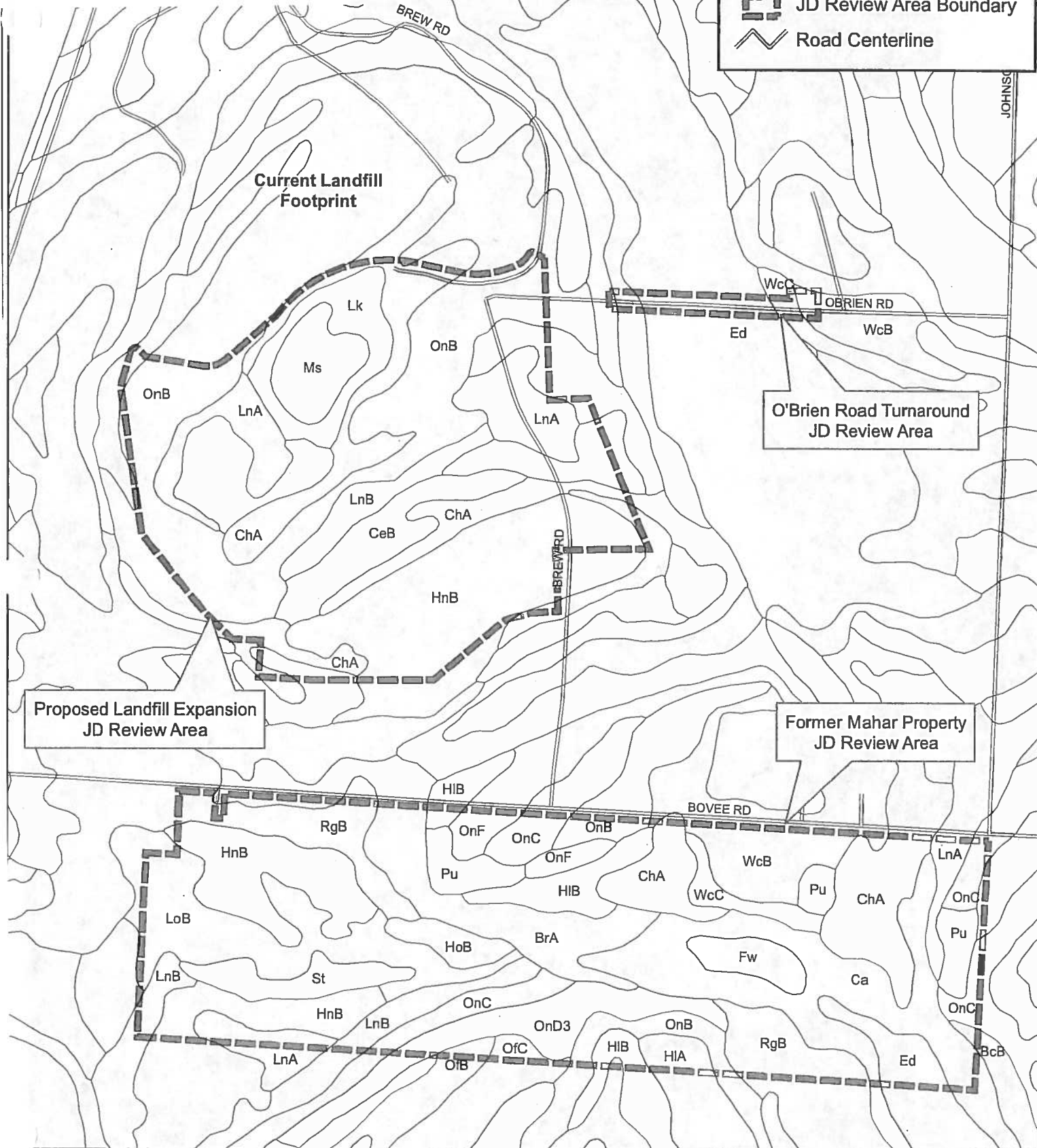
- Road Centerline
- Borrow Area Limits (prior project - JD received)
- Property Owners**
- Monroe County
- Monroe County Property (Leased to WM)
- Waste Management





**Legend**

- Mapped Soil Boundary
- JD Review Area Boundary
- Road Centerline

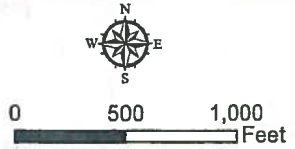
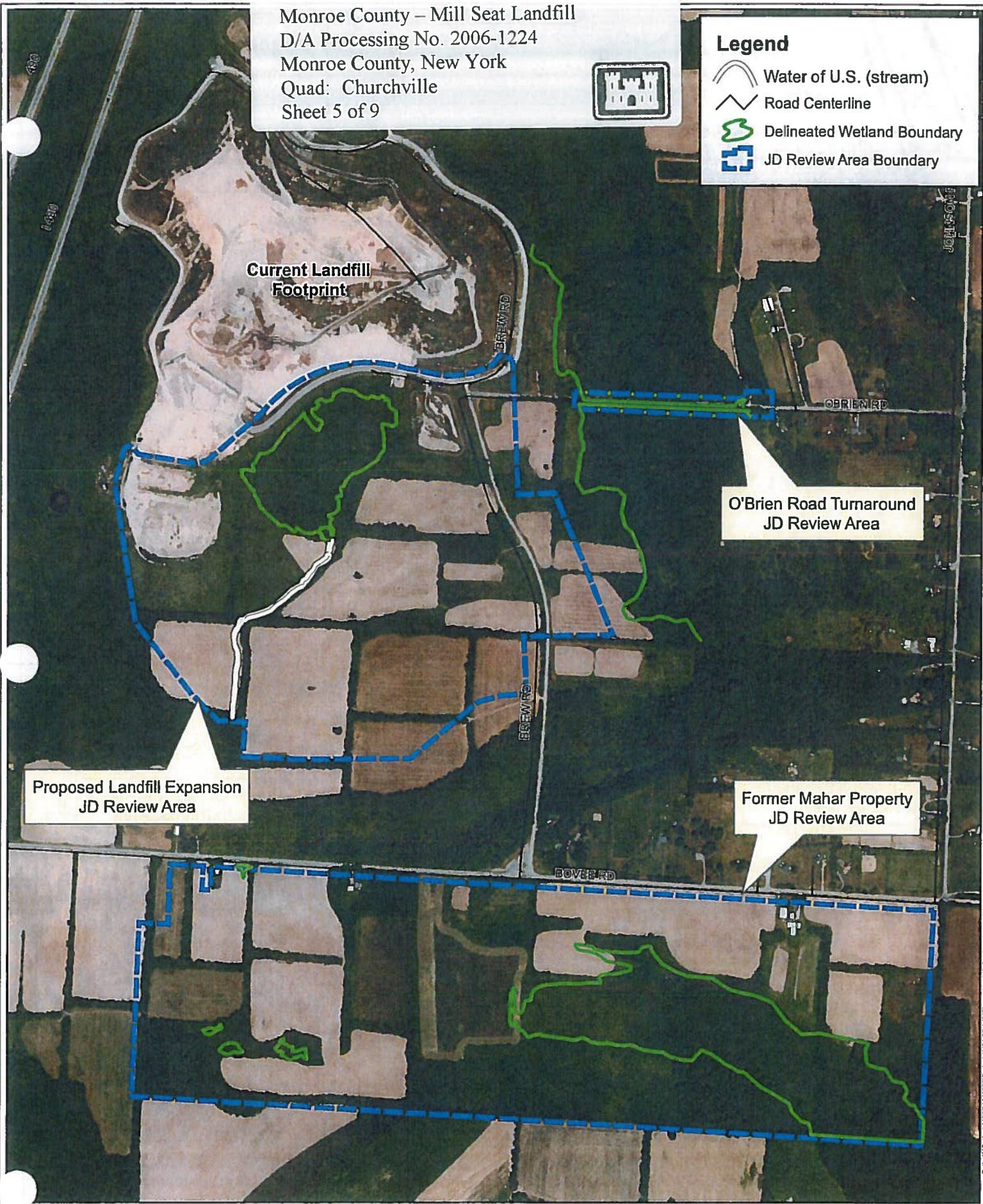


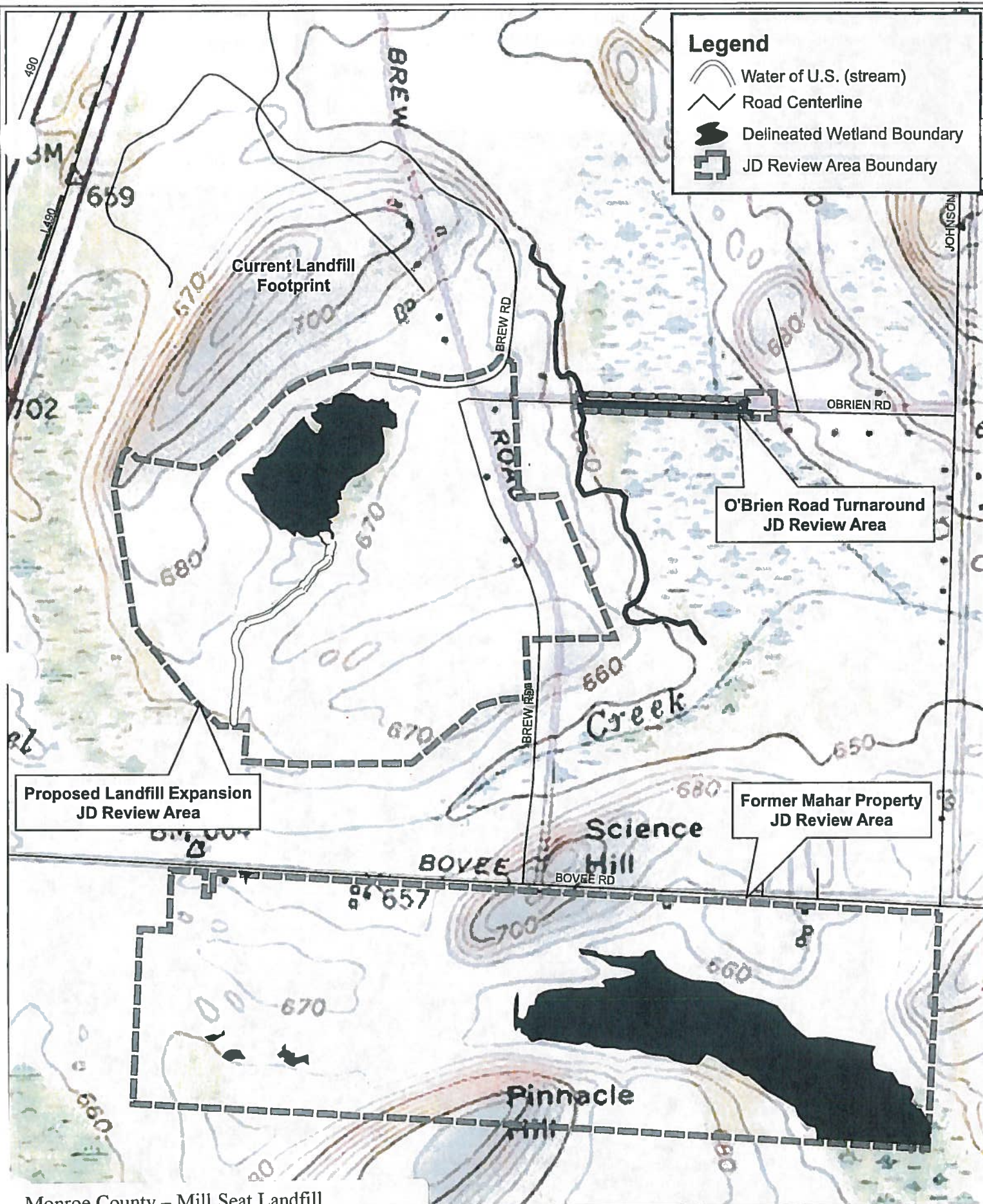
Monroe County – Mill Seat Landfill  
 D/A Processing No. 2006-1224  
 Monroe County, New York  
 Quad: Churchville  
 Sheet 5 of 9



**Legend**

- Water of U.S. (stream)
- Road Centerline
- Delineated Wetland Boundary
- JD Review Area Boundary

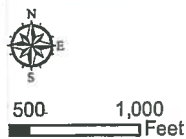




**Legend**

- Water of U.S. (stream)
- Road Centerline
- Delineated Wetland Boundary
- JD Review Area Boundary

Monroe County – Mill Seat Landfill  
 D/A Processing No. 2006-1224  
 Monroe County, New York  
 Quad: Churchville  
 Sheet 6 of 9



Proposed Mill Seat Landfill Expansion  
 AJD Documentation

**AJD Review Areas**

Monroe County    October 2013    New York

Figure  
 4b

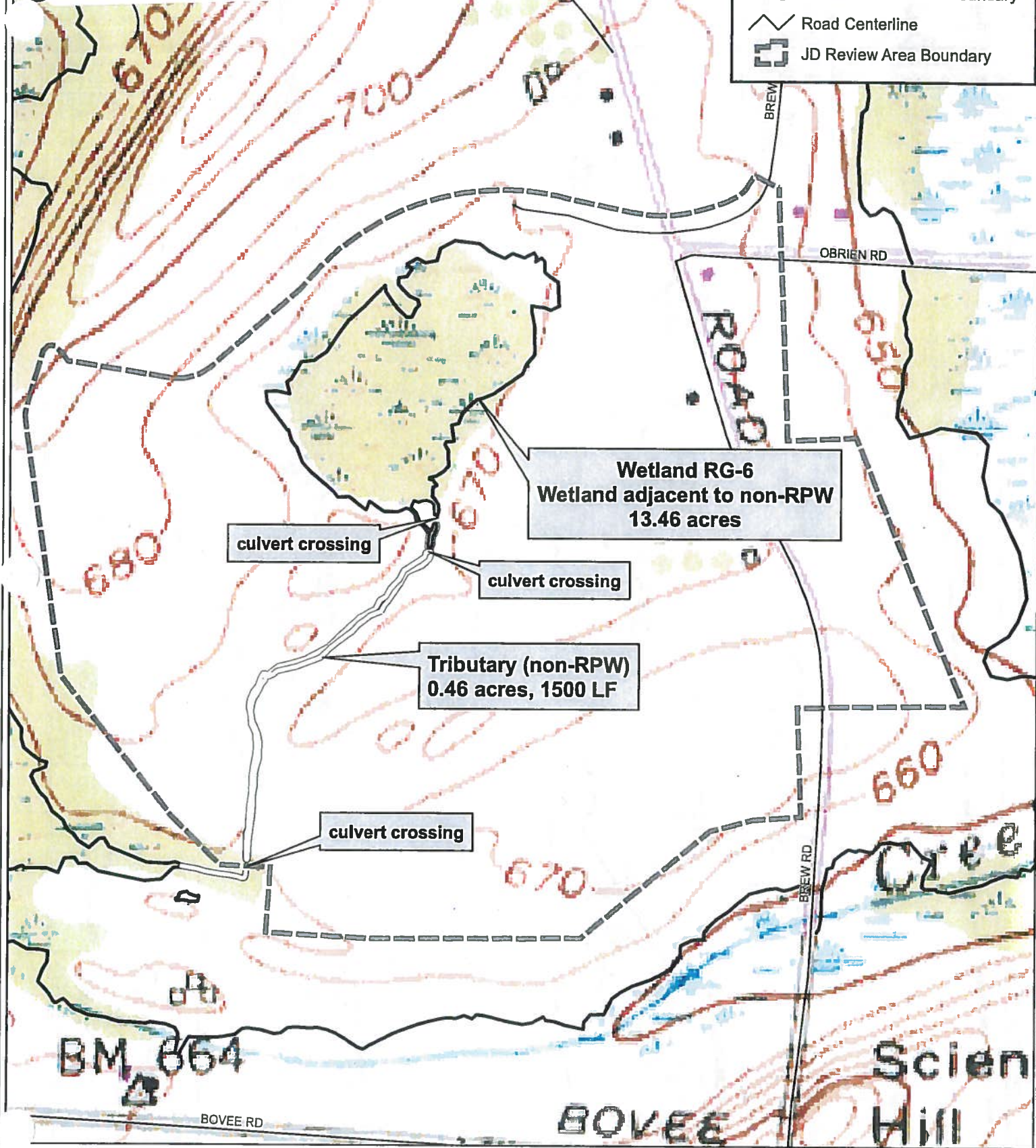
Project  
 No. 1242.022

Monroe County – Mill Seat Landfill  
 D/A Processing No. 2006-1224  
 Monroe County, New York  
 Quad: Churchville  
 Sheet 7 of 9



**Legend**

- Waters of the U.S. (stream)
- Delineated Wetland Boundary
- Road Centerline
- JD Review Area Boundary



**Wetland RG-6**  
 Wetland adjacent to non-RPW  
 13.46 acres

culvert crossing

culvert crossing

**Tributary (non-RPW)**  
 0.46 acres, 1500 LF

culvert crossing



Proposed Mill Seat Landfill Expansion  
 A/D Documentation  
**Proposed Expansion Review Area**  
**154 acres**  
 Monroe County    October 2013    New York

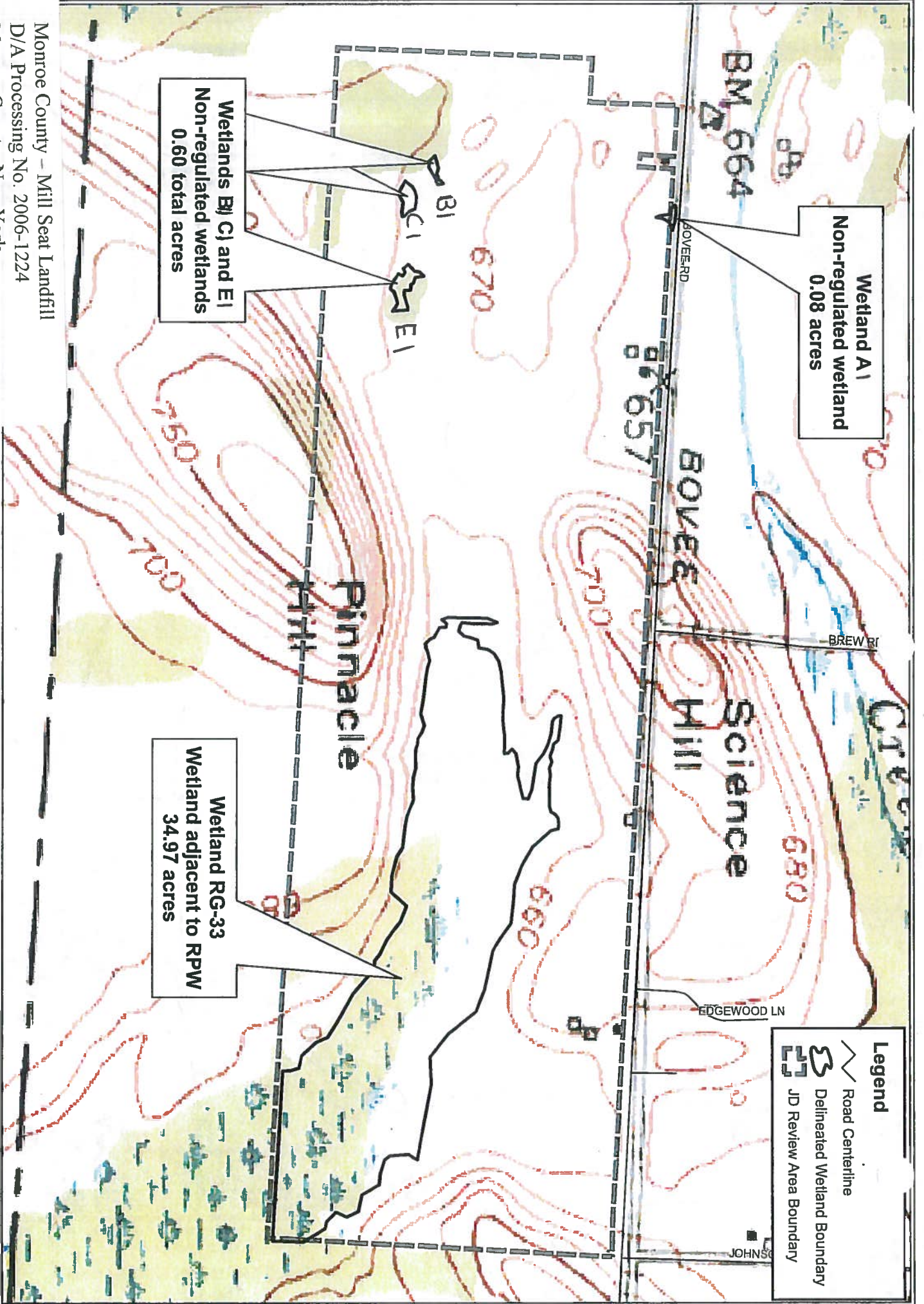
Figure  
 5a  
 Project  
 No.  
 1242.022

Momroe County - Mill Seat Landfill  
 D/A Processing No. 2006-1224  
 Momroe County, New York  
 Quad: Churchville



Proposed Mill Seat Landfill Expansion  
 A/D Documentation

Figure 5b



**Legend**

- Road Centerline
- Delineated Wetland Boundary
- JD Review Area Boundary

BREW RD

Monroe County - Mill Seat Landfill  
D/A Processing No. 2006-1224  
Monroe County, New York  
Quad: Churchville  
Sheet 9 of 9



**Legend**

- Road Centerline
- Delineated Wetland Boundary
- JD Review Area Boundary

Wetland RG-7  
Wetland directly abutting RPW  
1.40 acres

Wetland RG-7  
Wetland directly abutting RPW  
0.02 acres

Wetland RG-7  
Wetland directly abutting RPW  
1.05 acres

GERRARD RD





**Approved JD under No. 2006-01224 and  
issued June 11, 2014**



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

REPLY TO  
ATTENTION OF:

June 11, 2014

Regulatory Branch

SUBJECT: Jurisdictional Determination No. 2006-01224

Russell Rutkowski  
Monroe County Dept. of Environmental Services  
City Place  
50 West Main St, Suite 7100  
Rochester, New York 14614-1228

Dear Mr. Ruthowski:

I am writing to you in regard to the recent wetland delineation report submitted on your behalf by Mrs. Johanna Duffy of Barton & Loguidice for a jurisdictional determination for the proposed Mill Seat Landfill Expansion area located along O'Brien and Bovee (Mahar Property) Roads, Town of Riga, Monroe 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 October 2013. This verification was confirmed on November 15, 2013 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 United States Department of Agriculture (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.

Regulatory Branch

SUBJECT: Jurisdictional Determination 2006-01224

Based upon my review of the submitted delineation and on-site observations, I have determined that wetland areas D (34.97 acres), RG-6 (13.46 acres) & RG-7 (2.47 acres) and Tributary 1 (1,500 linear feet) 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 (JD) form. Therefore, the wetland(s) is/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 this/these area(s).

In addition, I have determined that there is no clear surface water connection or ecological continuum between wetland areas A1, B1, C1 & E1 (Total = 0.68 acres) 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 JD for the subject parcel. If you object to this JD, 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 JD, 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:

Attn: Appeal Review Officer  
Great Lakes and Ohio River Division  
CELRD-PDS-O  
550 Main Street, Room 10524  
Cincinnati, OH 45202-3222  
Phone: 513-684-6212; FAX 513-684-2460

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 August 12, 2014.

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 has been sent to Mrs. Johanna Duffy of Barton and Loguidice.

Regulatory Branch

SUBJECT: Jurisdictional Determination 2006-01224

Questions pertaining to this matter should be directed to me by calling 716-879-4279, by writing to the following address: U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207, or by e-mail at: [joseph.m.rowley@usace.army.mil](mailto:joseph.m.rowley@usace.army.mil)

Sincerely,



Joseph Rowley  
Physical Scientist

Enclosures

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND  
REQUEST FOR APPEAL**

Applicant: Monroe County Dept of Environmental Services		File Number: 2006-01224	Date: June 11, 2014
Attached is:			See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
	PROFFERED PERMIT (Standard Permit or Letter of permission)		B
	PERMIT DENIAL		C
X	APPROVED JURISDICTIONAL DETERMINATION		D
	PRELIMINARY JURISDICTIONAL DETERMINATION		E

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

- A: INITIAL PROFFERED PERMIT:** You may accept or object to the permit.
- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
  - **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.
- B: PROFFERED PERMIT:** You may accept or appeal the permit
- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
  - **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- C: PERMIT DENIAL:** You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- D: APPROVED JURISDICTIONAL DETERMINATION:** You may accept or appeal the approved JD or provide new information.
- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
  - **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- E: PRELIMINARY JURISDICTIONAL DETERMINATION:** You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

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

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

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

**POINT OF CONTACT FOR QUESTIONS OR INFORMATION:**

<p>If you have questions regarding this decision and/or the appeal process you may contact:</p> <p>Joseph Rowley United States Army Corps of Engineers Buffalo District 1776 Niagara Street Buffalo, NY 14207 716-879-4279 joseph.m.rowley@usace.army.mil</p>	<p>If you only have questions regarding the appeal process you may also contact:</p> <p>Attn: Appeal Review Officer Great Lakes and Ohio River Division CELRD-PD-REG 550 Main Street, Room 10524 Cincinnati, OH 45202-3222 513-684-6212; FAX 513-684-2460</p>
---	---

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

<p>_____ Signature of appellant or agent.</p>	<p>Date:</p>	<p>Telephone number:</p>
---	--------------	--------------------------



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

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

**SECTION I: BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):** June 10, 2014

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER:** LRB 2006-01224 (Monroe County-Mill St Landfill)

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: New York      County/parish/borough: Monroe      City: Riga  
Center coordinates of site (lat/long in degree decimal format): Lat. 43.044 °N, Long. -77.93 °W  
Universal Transverse Mercator: *Click here to enter text.*

Name of nearest waterbody: Tributary 2 of Mill Creek (aka Blue Pond Inlet)  
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Genesee River  
Name of watershed or Hydrologic Unit Code (HUC): 04130003

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

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

- Office (Desk) Determination. Date: April 23, 2014  
 Field Determination. Date(s): November 15, 2013

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

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

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

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There are no "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. *[Required]*

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

- TNWs, including territorial seas  
 Wetlands adjacent to TNWs  
 Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs  
 Non-RPWs that flow directly or indirectly into TNWs  
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs  
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs  
 Impoundments of jurisdictional waters  
 Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: # linear feet: # width (ft) and/or # acres.  
Wetlands: 37.44 acres.

**c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual**

Elevation of established OHWM (if known): *Click here to enter text.*

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.  
Explain:

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.



### SECTION III: CWA ANALYSIS

#### A. TNWs AND WETLANDS ADJACENT TO TNWs

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

##### 1. TNW

Identify TNW: *Click here to enter text.*

Summarize rationale supporting determination: *Click here to enter text.*

##### 2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": *Click here to enter text.*

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

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

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

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

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

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

###### (i) General Area Conditions:

Watershed size: # *Choose an item.*

Drainage area: # *Choose an item.*

Average annual rainfall: # inches

Average annual snowfall: # inches

###### (ii) Physical Characteristics:

###### (a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through *Choose an item.* tributaries before entering TNW.

Project waters are *Choose an item.* river miles from TNW.

Project waters are *Choose an item.* river miles from RPW.

Project waters are *Choose an item.* aerial (straight) miles from TNW.

Project waters are *Choose an item.* aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: *Click here to enter text.*

Identify flow route to TNW<sup>5</sup>: *Click here to enter text.*

Tributary stream order, if known: *Click here to enter text.*

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

Tributary is:  Natural

Artificial (man-made). Explain: *Click here to enter text.*

Manipulated (man-altered). Explain: *Click here to enter text.*

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

**Tributary properties with respect to top of bank (estimate):**

Average width: # feet

Average depth: # feet

Average side slopes: *Choose an item.*

**Primary tributary substrate composition (check all that apply):**

- Silts                       Sands                       Concrete  
 Cobbles                       Gravel                       Muck  
 Bedrock                       Vegetation. Type/% cover: *Click here to enter text.*  
 Other. Explain: *Click here to enter text.*

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: *Click here to enter text.*

Presence of run/riffle/pool complexes. Explain: *Click here to enter text.*

Tributary geometry: *Choose an item.*

Tributary gradient (approximate average slope): #%

**(c) Flow:**

Tributary provides for: *Choose an item.*

Estimate average number of flow events in review area/year: *Choose an item.*

Describe flow regime: *Click here to enter text.*

Other information on duration and volume: *Click here to enter text.*

Surface flow is: *Choose an item.* Characteristics: *Click here to enter text.*

Subsurface flow: *Choose an item.* Explain findings: *Click here to enter text.*

Dye (or other) test performed: *Click here to enter text.*

**Tributary has (check all that apply):**

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

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

- High Tide Line indicated by:               Mean High Water Mark indicated by:  
 oil or scum line along shore objects        survey to available datum;  
 fine shell or debris deposits (foreshore)    physical markings;  
 physical markings/characteristics        vegetation lines/changes in vegetation types.  
 tidal gauges  
 other (list): *Click here to enter text.*

**(iii) Chemical Characteristics:**

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

Explain: *Click here to enter text.*

Identify specific pollutants, if known: *Click here to enter text.*

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

<sup>7</sup>Ibid.

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

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

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

**(i) Physical Characteristics:**

**(a) General Wetland Characteristics:**

Properties:

- Wetland size: # acres
- Wetland type. Explain: *Click here to enter text.*
- Wetland quality. Explain: *Click here to enter text.*
- Project wetlands cross or serve as state boundaries. Explain: *Click here to enter text.*

**(b) General Flow Relationship with Non-TNW:**

Flow is: *Choose an item.* Explain: *Click here to enter text.*

Surface flow is: *Choose an item.*

Characteristics: *Click here to enter text.*

Subsurface flow: *Choose an item.* Explain findings: *Click here to enter text.*

Dye (or other) test performed: *Click here to enter text.*

**(c) Wetland Adjacency Determination with Non-TNW:**

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: *Click here to enter text.*

Ecological connection. Explain: *Click here to enter text.*

Separated by berm/barrier. Explain: *Click here to enter text.*

**(d) Proximity (Relationship) to TNW**

Project wetlands are *Choose an item.* river miles from TNW.

Project waters are *Choose an item.* aerial (straight) miles from TNW.

Flow is from: *Choose an item.*

Estimate approximate location of wetland as within the *Choose an item.* floodplain.

**(ii) Chemical Characteristics:**

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

Identify specific pollutants, if known: *Click here to enter text.*

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

Riparian buffer. Characteristics (type, average width): *Click here to enter text.*

Vegetation type/percent cover. Explain: *Click here to enter text.*

Habitat for:

Federally Listed species. Explain findings: *Click here to enter text.*

Fish/spawn areas. Explain findings: *Click here to enter text.*

Other environmentally-sensitive species. Explain findings: *Click here to enter text.*

Aquatic/wildlife diversity. Explain findings: *Click here to enter text.*

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

All wetland(s) being considered in the cumulative analysis: *Choose an item.*

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

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
Y/N	#	Y/N	#
Y/N	#	Y/N	#
Y/N	#	Y/N	#
Y/N	#	Y/N	#

Summarize overall biological, chemical and physical functions being performed: *Click here to enter text.*

### C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: *Click here to enter text.*
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: *Click here to enter text.*
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: *Click here to enter text.*

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

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

TNWs: # linear feet # width (ft), Or, # acres.

Wetlands adjacent to TNWs: # acres.

2. **RPWs that flow directly or indirectly into TNWs.**

Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: *Click here to enter text.*

Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: *Click here to enter text.*

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

Tributary waters: # linear feet # width (ft).

Other non-wetland waters: # acres.

Identify type(s) of waters: *Click here to enter text.*

3. **Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

Tributary waters: # linear feet # width (ft).

Other non-wetland waters: # acres.

Identify type(s) of waters: *Click here to enter text.*

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

<sup>8</sup>See Footnote # 3.

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Wetland D(RG-33) (34.97 acres) represents the headwater wetlands of an unnamed tributary to Mill Creek (also known as Blue Pond Inlet). Also, Wetland D(RG-33) is a mapped, NYSDEC regulated wetland. The wetland continues to the southeast beyond the limits of the delineated parcel. Based on a review of the NYSDEC's Environmental Resource Mapper and aerial photography, the wetland system continues east towards Route 166, where a mapped stream, an unnamed tributary to Mill Creek, begins. The unnamed tributary to Mill Creek is represented on the Churchville USGS as a solid blue line which indicates perennial flow.

Delineated wetland RG-7 (2.47 acres) is associated with an unnamed Tributary to Hotel Creek, NYSDEC mapped Class C stream and blue line on the USGS Churchville quad. A culvert crosses underneath O'Brien Road within the limits of the delineated parcel/review area. The culvert provides a hydrological connection between wetland RG-7 north and RG-7 south. According to the delineation report, wetland RG-7 that surrounds O'Brien road has been observed to have standing water throughout much of the year. The unnamed tributary to Hotel Creek is located within the delineated limits of wetland RG-7; the wetland represents the headwaters of this tributary.

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

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

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

7. **Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or
- Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
- Demonstrate that water is isolated with a nexus to commerce (see E below).

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

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

**Identify water body and summarize rationale supporting determination:** *Click here to enter text.*

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

- Tributary waters: # linear feet # width (ft).
- Other non-wetland waters: # acres.  
Identify type(s) of waters: *Click here to enter text.*
- Wetlands: # acres.

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

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

<sup>9</sup> To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

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

Other: (explain, if not covered above): *Click here to enter text.*

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

- Non-wetland waters (i.e., rivers, streams): # linear feet # width (ft).
- Lakes/ponds: # acres.
- Other non-wetland waters: # acres. List type of aquatic resource: *Click here to enter text.*
- Wetlands: # acres.

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

- Non-wetland waters (i.e., rivers, streams): # linear feet # width (ft).
- Lakes/ponds: # acres.
- Other non-wetland waters: # acres. List type of aquatic resource: *Click here to enter text.*
- Wetlands: # acres.

#### **SECTION IV: DATA SOURCES.**

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

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Barton & Loguidice Delineation dated October 2013
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - Office concurs with data sheets/delineation report.
  - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: *Click here to enter text.*
- Corps navigable waters' study: *Click here to enter text.*
- U.S. Geological Survey Hydrologic Atlas: *Click here to enter text.*
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: Churchville Quad, 1:20,000
- USDA Natural Resources Conservation Service Soil Survey. Citation: USDA/NRCS Web Soil Survey
- National wetlands inventory map(s). Cite name: USFWS Wetland Mapper; Mapped Federal wetlands are within the vicinity of the delineated parcel
- State/Local wetland inventory map(s): NYSDEC Environmental Resource Mapper, Multiple NYSDEC regulated are within the vicinity of the delineated parcel
- FEMA/FIRM maps: *Click here to enter text.*
- 100-year Floodplain Elevation is: *Click here to enter text.* (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): Bing/Google Maps
- or  Other (Name & Date): *Click here to enter text.*
- Previous determination(s). File no. and date of response letter: *Click here to enter text.*
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify):

**B. ADDITIONAL COMMENTS TO SUPPORT JD: None**

  
\_\_\_\_\_  
Joseph M. Rowley  
Project Manager

\_\_\_\_\_  
April 30, 2014  
Date



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

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

**SECTION I: BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):--June 10, 2014**

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: 2006-01224 (Monroe County-Mill St Landfill)**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION:**

State: New York County/parish/borough: Monroe City: Riga  
Center coordinates of site (lat/long in degree decimal format): Lat. 43.044 °N °, Long. -77.93 °W °  
Universal Transverse Mercator: *Click here to enter text.*

Name of nearest waterbody: Hotel Creek

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Genesee River

Name of watershed or Hydrologic Unit Code (HUC): 04130003

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

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

Office (Desk) Determination. Date: April 23, 2014

Field Determination. Date(s): November 15, 2013

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

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

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

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

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

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: 1500 linear feet: 4-8 width (ft) and/or 0.46 acres.

Wetlands: 13.46 acres.

**c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual**

Elevation of established OHWM (if known): *Click here to enter text.*

**2. Non-regulated waters/wetlands (check if applicable):<sup>3</sup>**

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.  
Explain: **I conducted a site visit on November 15, 2013 and also reviewed in-house resources including, topographical maps, aerial photography and soils maps. I walked the perimeter of Wetlands A1, B1, C1 & E1 (Total = 0.68 acres) and I did not observe any surface flow or culverts going away from them or any shallow subsurface connections. No ecological nexus to any drainageways were seen in the vicinity of wetlands A1, B1, C1 & E1. Wetland A1, B1, C1 & E1 appear to be only intermittently saturated, vernal pools that may support amphibian species. Wetlands A1, B1, C1 & E1 did not show evidence of standing water (no water marks or**

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

<sup>3</sup> Supporting documentation is presented in Section III.F.



drift lines) and therefore may not hold water long enough for substantial flood storage. I didn't observe any drainages or flow from Wetlands A1, B1, C1 & E1 into any other the wetland or drainageway. Wetlands A1, B1, C1 & E1 are geographically isolated and therefore are not jurisdictional.

### SECTION III: CWA ANALYSIS

#### A. TNWs AND WETLANDS ADJACENT TO TNWs

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

##### 1. TNW

Identify TNW: *Click here to enter text.*

Summarize rationale supporting determination: *Click here to enter text.*

##### 2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": *Click here to enter text.*

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

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

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

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

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

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

###### (i) General Area Conditions:

Watershed size: # 2,373 square miles (Genesee River Watershed), 202 square miles (Black Creek Watershed)

Drainage area: # slightly over 100 acres

Average annual rainfall: 35 inches

Average annual snowfall: 63 inches

###### (ii) Physical Characteristics:

###### (a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 2 tributaries before entering TNW.

Project waters are 15-20 river miles from TNW.

Project waters are 1 (or less) river miles from RPW.

Project waters are 10-15 aerial (straight) miles from TNW.

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

Project waters cross or serve as state boundaries. Explain: No

Identify flow route to TNW<sup>5</sup>: Wetland RG-6 flows south into an unnamed and unmapped drainage (referred to as RG-6's drainage) which empties into Hotel Creek. Hotel Creek is the ninth tributary of Black Creek, which is the 19<sup>th</sup> tributary of the Genesee River, the closet TNW.

Tributary stream order, if known: RG-6's drainage is unmapped but Hotel Creek, where the drainage empties into this waterbody, is a first order stream.

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

Tributary is:  Natural

Artificial (man-made). Explain: *Click here to enter text.*

Manipulated (man-altered). Explain: Channel has been excavated and modified in the past to carry runoff from adjacent agricultural fields and from RG-6 without the risk of flooding the fields themselves.

Tributary properties with respect to top of bank (estimate):

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

Average width: 6 feet  
Average depth: 3 feet  
Average side slopes: 2:1 to 3:1

Primary tributary substrate composition (check all that apply):

- |   |   |                                   |
|---|---|-----------------------------------|
| <input type="checkbox"/> Silts  | <input type="checkbox"/> Sands  | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles  | <input type="checkbox"/> Gravel   | <input type="checkbox"/> Muck     |
| <input type="checkbox"/> Bedrock  | <input checked="" type="checkbox"/> Vegetation. Type/% cover: herbaceous and woody vines in channel with shrubs overhanging/ Approximately 80% canopy cover along length of drainage. |                                   |
| <input checked="" type="checkbox"/> Other. Explain: substrate is primarily a clay loam. Limited cobbles/rocks for most of its length. |   |                                   |

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: water elevation doesn't get high enough to affect banks. Due to the amount of vegetative cover, banks are fairly stable, despite a consistent 2:1 to 3:1 slope along the channel.

Presence of run/riffle/pool complexes. Explain: absent

Tributary geometry: relatively straight

Tributary gradient (approximate average slope): 30%

(c) Flow:

Tributary provides for: intermittent

Estimate average number of flow events in review area/year: 20 (or greater)

Describe flow regime: Wetland RG-6 and associated drainages rely on area surface runoff and discharge from the landfill site stormwater detention basin for their flow. Groundwater is not a major factor contributing recharge and it is estimated that groundwater discharge accounts for less than 1/2% of the total flow to the wetland with precipitation and runoff providing the primary source of recharge

Other information on duration and volume: *Click here to enter text.*

Surface flow is: confined Characteristics: Surface water flow within RG-6's drainage is confined to a channel for most of its length.

Subsurface flow: Unknown Explain findings: amount of subsurface flow is unknown but estimated to be very limited based on previous hydrogeologic work performed on the landfill site and for the soil borrow area project.

Dye (or other) test performed: *Click here to enter text.*

Tributary has (check all that apply):

Bed and banks

OHWM<sup>6</sup> (check all indicators that apply):

- |   |  |
|---|--|
| <input type="checkbox"/> clear, natural line impressed on the bank          | <input type="checkbox"/> the presence of litter and debris                                 |
| <input type="checkbox"/> changes in the character of soil                   | <input type="checkbox"/> destruction of terrestrial vegetation                             |
| <input type="checkbox"/> shelving   | <input type="checkbox"/> the presence of wrack line  |
| <input checked="" type="checkbox"/> vegetation matted down, bent, or absent | <input type="checkbox"/> sediment sorting  |
| <input type="checkbox"/> leaf litter disturbed or washed away               | <input type="checkbox"/> scour   |
| <input checked="" type="checkbox"/> sediment deposition                     | <input type="checkbox"/> multiple observed or predicted flow events                        |
| <input checked="" type="checkbox"/> water staining                          | <input type="checkbox"/> abrupt change in plant community <i>Click here to enter text.</i> |
| <input type="checkbox"/> other (list): <i>Click here to enter text.</i>     |  |

Discontinuous OHWM.<sup>7</sup> Explain: *Click here to enter text.*

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

- |   |  |
|---|--|
| <input type="checkbox"/> High Tide Line indicated by:                   | <input type="checkbox"/> Mean High Water Mark indicated by:            |
| <input type="checkbox"/> oil or scum line along shore objects           | <input type="checkbox"/> survey to available datum;                    |
| <input type="checkbox"/> fine shell or debris deposits (foreshore)      | <input type="checkbox"/> physical markings;                            |
| <input type="checkbox"/> physical markings/characteristics              | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges                                   |  |
| <input type="checkbox"/> other (list): <i>Click here to enter text.</i> |  |

(iii) **Chemical Characteristics:**

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

Explain: Water flow within RG-6's drainage is generally clear, sometimes with an organic film on top of the water surface during low flow events or when the water is stagnant within the channel.

Identify specific pollutants, if known: No known pollutants

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

Riparian corridor. Characteristics (type, average width): woody shrubs and saplings line the channel on both sides with a variety of herbaceous vegetation along the bed and/or banks of the stream.

Wetland fringe. Characteristics: *Click here to enter text*

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

<sup>7</sup>Ibid.

- Habitat for:
  - Federally Listed species. Explain findings: *Click here to enter text.*
  - Fish/spawn areas. Explain findings: *Click here to enter text.*
  - Other environmentally-sensitive species. Explain findings: *Click here to enter text.*
  - Aquatic/wildlife diversity. Explain findings: *Click here to enter text.*

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

**(i) Physical Characteristics:**

**(a) General Wetland Characteristics:**

Properties:

Wetland size: 13.46 acres

Wetland type. Explain: Palustrine forested

Wetland quality. Explain: Perched – limited groundwater infiltration reliant on precipitation. Vegetative wetland type is of high quality.

Project wetlands cross or serve as state boundaries. Explain: not applicable

**(b) General Flow Relationship with Non-TNW:**

Flow is: Intermittent Flow Explain: Much of the flow from Wetland RG-6 to its associated drainage is governed by precipitation events but discharges from the stormwater detention basin also contribute surface water to the wetland. Wetland RG-6 discharges to its drainage primarily via a culvert structure (installed to provide access to agricultural field to the west).

Surface flow is: Discrete

Characteristics: Water flow is not visually observed within wetland RG-6 except at the outlet and the stormwater detention basin discharge location. According to the delineation report, surface water has been observed within the wetland throughout much of the year.

Subsurface flow: No Explain findings: Subsurface flow is unknown

Dye (or other) test performed: *Click here to enter text.*

**(c) Wetland Adjacency Determination with Non-TNW:**

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain: *Click here to enter text.*

Ecological connection. Explain: *Click here to enter text.*

Separated by berm/barrier. Explain: *Click here to enter text.*

**(d) Proximity (Relationship) to TNW**

Project wetlands are 10-15 river miles from TNW.

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

Flow is from: wetland to navigable waters

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

**(ii) Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Water color is fairly clear. Heavy decomposition of vegetation within the wetland. Organic film on the water surface in some locations. Wetland is at the headwaters of the watershed. Stormwater detention basin and wetland RG-6 help to filter sediments from the surface water that flows to the adjacent non-TNW.

Identify specific pollutants, if known: none are known

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

Riparian buffer. Characteristics (type, average width): *Click here to enter text.*

Vegetation type/percent cover. Explain: Primarily deciduous forest.

Habitat for:

Federally Listed species. Explain findings: *Click here to enter text.*

Fish/spawn areas. Explain findings: *Click here to enter text.*

Other environmentally-sensitive species. Explain findings: *Click here to enter text.*

Aquatic/wildlife diversity. Explain findings: the wetland supports different wildlife species such as forest mammals, birds and amphibians/reptiles.

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

All wetland(s) being considered in the cumulative analysis: 1

Approximately (13.46) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>	<u>Directly abuts? (Y/N)</u>	<u>Size (in acres)</u>
Wetland RG-6 - Yes	13.46	Y/N	#

Summarize overall biological, chemical and physical functions being performed: A hydrological connection can be traced from wetland RG-6 and its drainage to Hotel Creek then to Black Creek the the Genesee River, a TNW. Wetland RG-6 is primarily forested and a riparian buffer lines the stream resource on both sides throughout its length. Wetland RG-6 and to an extent the drainage remove sediment and other potential pollutants from the surface water before it reaches Hotel Creek.

### C. SIGNIFICANT NEXUS DETERMINATION

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

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

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

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

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: *Click here to enter text.*
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

Wetland RG-6 (13.46 acres) occurs entirely within the boundaries of the project site. During the site visit the wetland was in a relatively saturated condition. Flood attenuation/runoff storage, pollutant trapping/water quality, removal of suspended solids, dissolved solids, toxins and retention/treatment of nitrogen and phosphorus, functions are considered to be minimal for the subject wetland. Wildlife habitat functions are considered to be minimal.

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

Moderate appreciable lifecycle support functions, with respect to Genesee River are performed by the non RPW unnamed tributary to Hotel Creek (1500 linear feet) and its adjacent wetland for this relevant reach. There is habitat in the wetland to support aquatic species, amphibians, insects that are also present in the TNW. The wetland provides habitat for local communities of insects, birds, some amphibians and small mammals and avian species. The avian species which likely use this wetland and tributary could be closely associated with use of the TNW.

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

Yes, the non-RPW unnamed tributary to Hotel Creek serves as a primary collector and processor of organic matter and nutrients for downstream waters which includes the TNW, Genesee River. The non-RPW carries nutrients and can transport organic debris to the TNW. The storage and transformation of organic matter is important to these types of systems because it prevents downstream water quality degradation as a result of excess organic matter. The non-RPW also transforms unusable organic matter (inorganic carbon) into food for aquatic organisms (organic carbon) that reside in the TNW

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

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

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

TNWs: # linear feet # width (ft), Or, # acres.

Wetlands adjacent to TNWs: # acres.

2. **RPWs that flow directly or indirectly into TNWs.**

Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: *Click here to enter text.*

Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: *Click here to enter text.*

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

Tributary waters: # linear feet # width (ft).

Other non-wetland waters: # acres.

Identify type(s) of waters: *Click here to enter text.*

3. **Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

Tributary waters: 1500 linear feet 6 width (ft).

Other non-wetland waters: acres.

Identify type(s) of waters: *Click here to enter text.*

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.

Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: *Click here to enter text.*

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

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

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

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

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: 13.46 acres.

7. **Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

Demonstrate that impoundment was created from "waters of the U.S.," or

Demonstrate that water meets the criteria for one of the categories presented above (1-6), or

Demonstrate that water is isolated with a nexus to commerce (see E below).

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

which are or could be used by interstate or foreign travelers for recreational or other purposes.

from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

which are or could be used for industrial purposes by industries in interstate commerce.

Interstate isolated waters. Explain: *Click here to enter text.*

Other factors. Explain: *Click here to enter text.*

**Identify water body and summarize rationale supporting determination:** *Click here to enter text.*

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

Tributary waters: # linear feet # width (ft).

Other non-wetland waters: # acres.

Identify type(s) of waters: *Click here to enter text.*

Wetlands: # acres.

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

If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.

Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.

Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).

<sup>8</sup>See Footnote # 3.

<sup>9</sup>To complete the analysis refer to the key in Section III D.6 of the Instructional Guidebook.

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

- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: *Click here to enter text*
- Other: (explain, if not covered above): *Click here to enter text.*

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

- Non-wetland waters (i.e., rivers, streams): # linear feet # width (ft).
- Lakes/ponds: # acres.
- Other non-wetland waters: # acres. List type of aquatic resource: *Click here to enter text.*
- Wetlands: 0.68 acres.

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

- Non-wetland waters (i.e., rivers, streams): # linear feet # width (ft).
- Lakes/ponds: # acres.
- Other non-wetland waters: # acres. List type of aquatic resource:
- Wetlands: 0.68 acres.

**SECTION IV: DATA SOURCES.**

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

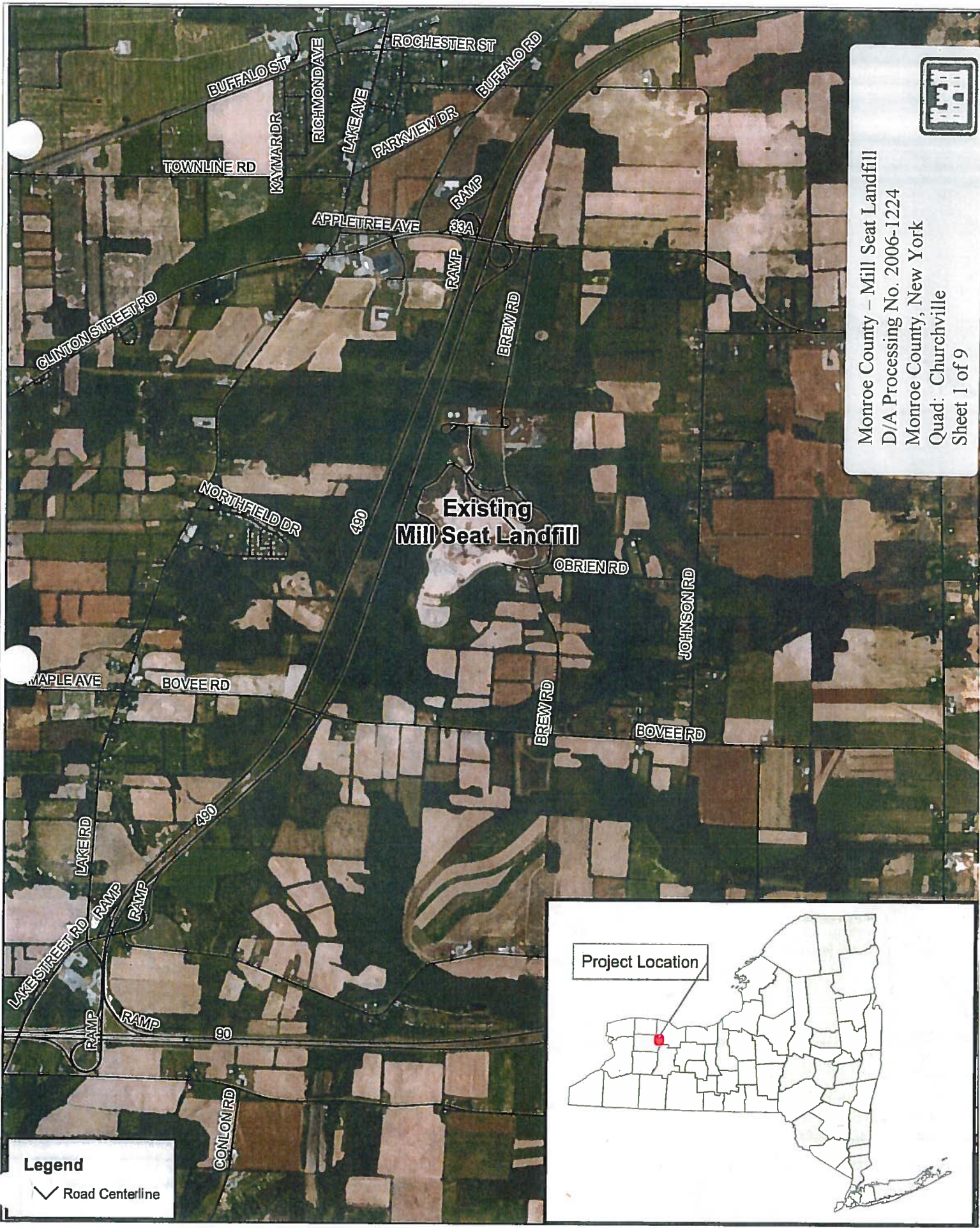
- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Barton & Loguidice Delineation dated October 2013
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - Office concurs with data sheets/delineation report.
  - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: *Click here to enter text.*
- Corps navigable waters' study: *Click here to enter text.*
- U.S. Geological Survey Hydrologic Atlas: *Click here to enter text.*
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: Churchville Quad, 1:20,000
- USDA Natural Resources Conservation Service Soil Survey. Citation: USDA/NRCS Web Soil Survey
- National wetlands inventory map(s). Cite name: USFWS Wetland Mapper; Mapped Federal wetlands are within the vicinity of the delineated parcel
- State/Local wetland inventory map(s): NYSDEC Environmental Resource Mapper, Multiple NYSDEC regulated are within the vicinity of the delineated parcel
- FEMA/FIRM maps: *Click here to enter text.*
- 100-year Floodplain Elevation is: *Click here to enter text.* (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): Bing/Google Maps
  - or  Other (Name & Date): *Click here to enter text.*
- Previous determination(s). File no. and date of response letter: *Click here to enter text.*
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify):


**B. ADDITIONAL COMMENTS TO SUPPORT JD:** Isolated wetlands A1, B1, C1 & E1 (Total = 0.68 acres) were field verified by the Corps of Engineers on November 15, 2013. The perimeter of the wetlands were walked and no evidence of any connection to other waters were identified. There were no connections between Wetlands A1, B1, C1 & E1 (Total = 0.68 acres) and any other waters on the Churchville USGS Quad or the USDA/NRCS Web Soil Survey. Wetlands A1, B1, C1 & E1 are isolated and outside the Department of the Army's jurisdiction. The determination is supported by the review of in-house resources and verified from a site visit. None of the 328.3(a)(3)(i-iii) factors are relevant in this case. Wetlands A1, B1, C1 & E1 don't support recreational or other use by interstate travelers, nor do they provide habitat for fish or shellfish. Wetlands A1, B1, C1 & E1 offers no use for industrial or commercial purposes. Wetlands A1, B1, C1 & E1 (Total = 0.68 acres) were determined to be isolated and therefore non-jurisdictional.

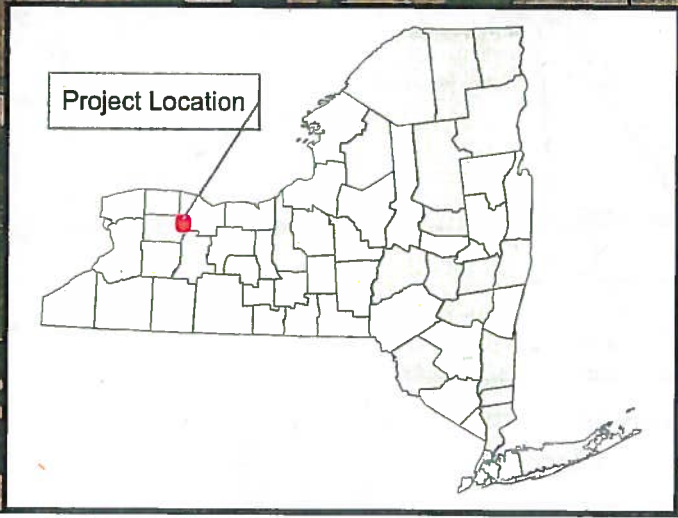
  
 \_\_\_\_\_  
 Joseph M. Rowley  
 Project Manager

April 30, 2014  
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 Date

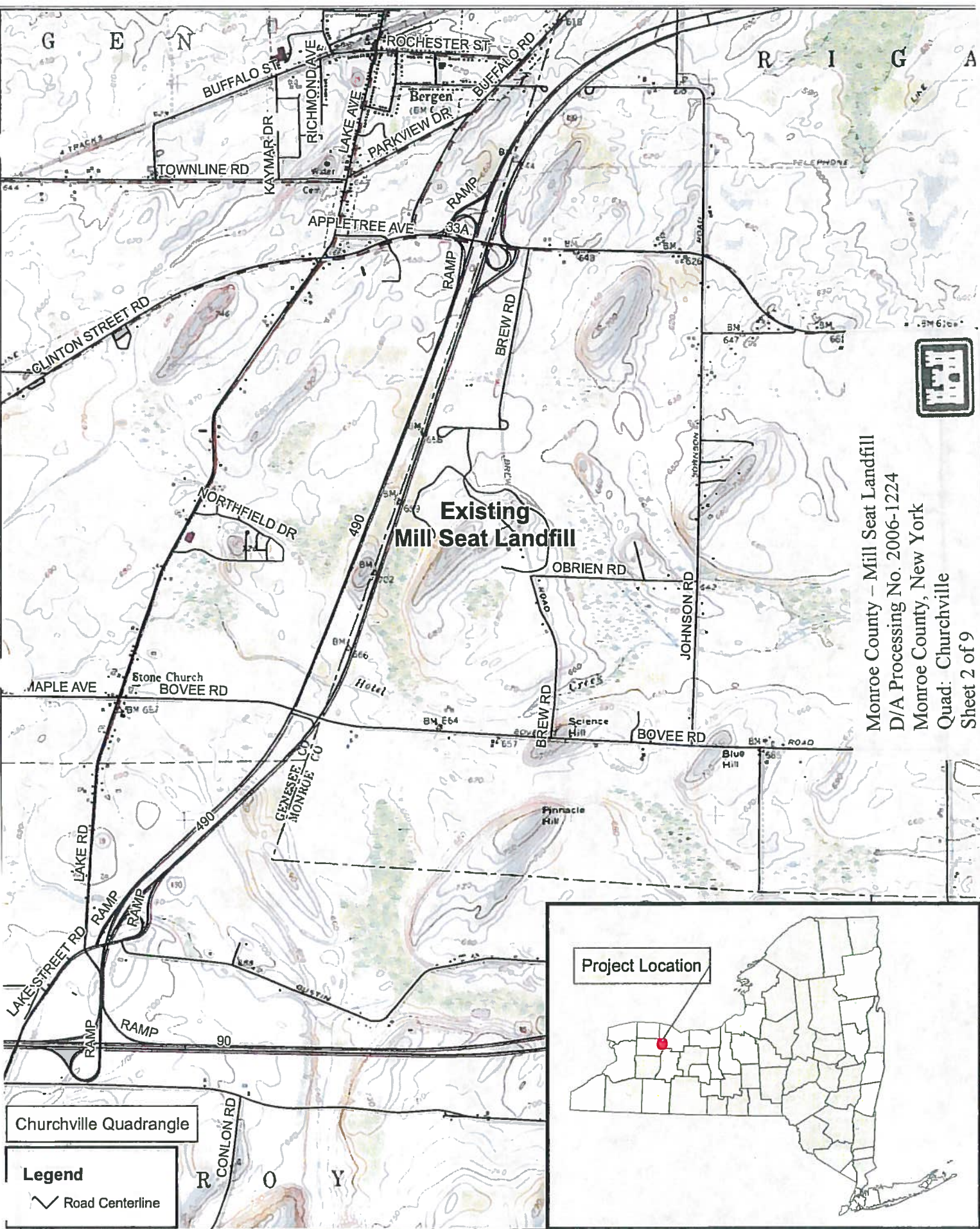




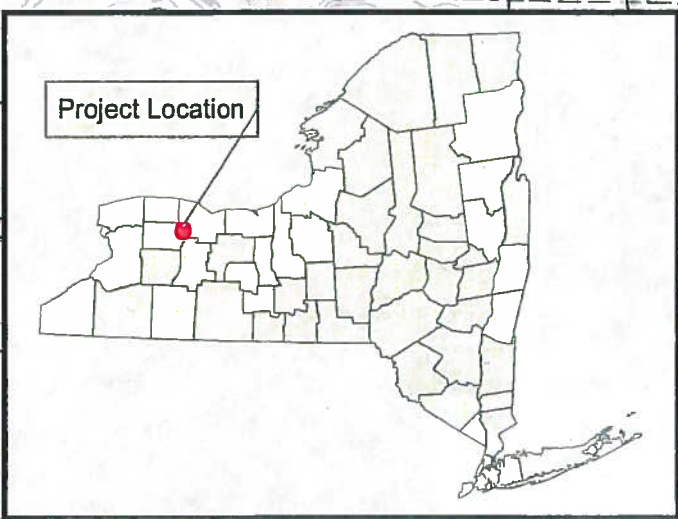
  
 Monroe County – Mill Seat Landfill  
 D/A Processing No. 2006-1224  
 Monroe County, New York  
 Quad: Churchville  
 Sheet 1 of 9







Monroe County – Mill Seat Landfill  
 D/A Processing No. 2006-1224  
 Monroe County, New York  
 Quad: Churchville  
 Sheet 2 of 9



Churchville Quadrangle

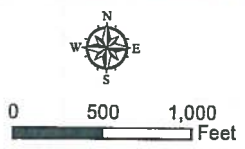
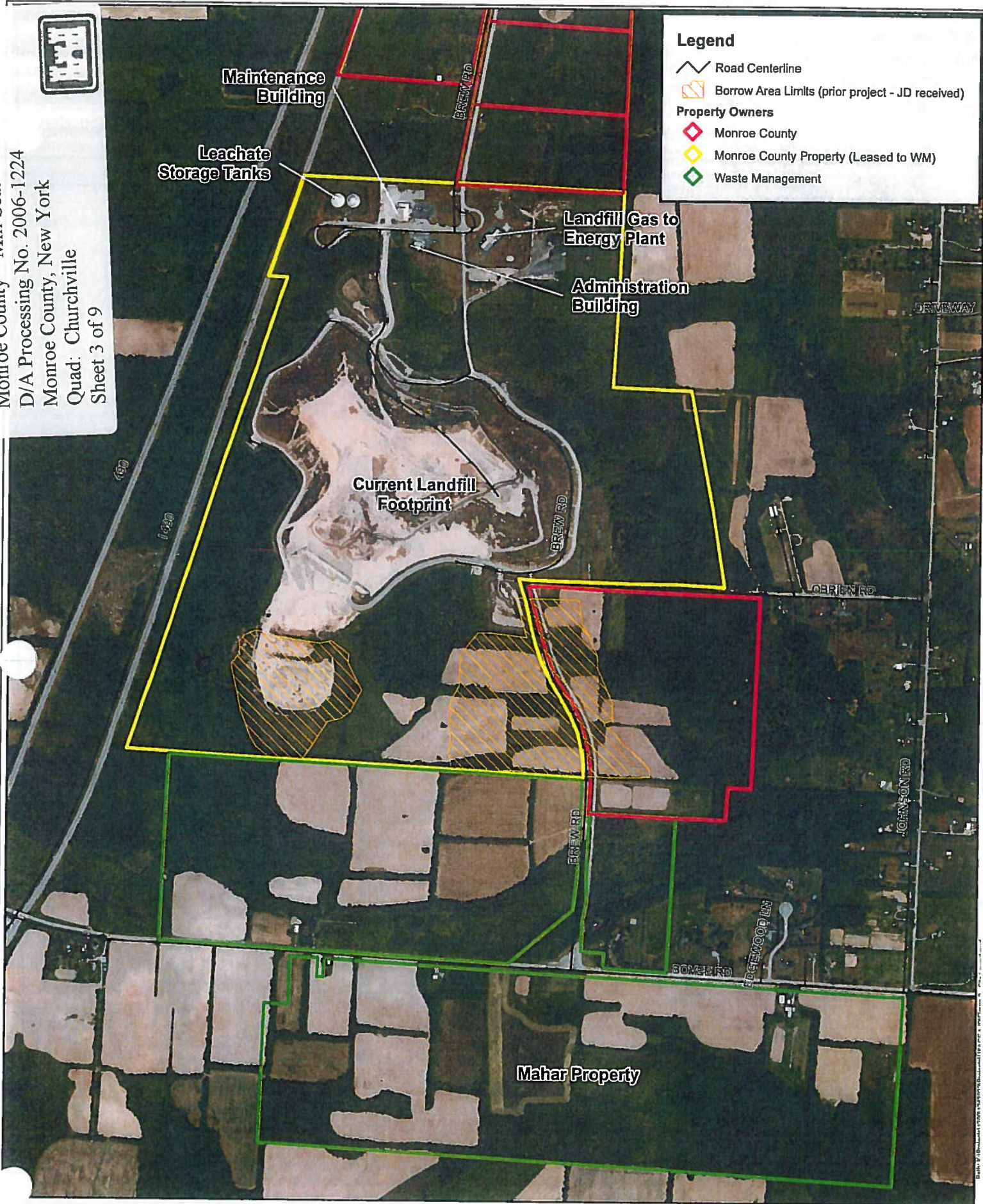
**Legend**  
 Road Centerline

Monroe County – Mill Seat Landfill  
 D/A Processing No. 2006-1224  
 Monroe County, New York  
 Quad: Churchville  
 Sheet 3 of 9



**Legend**

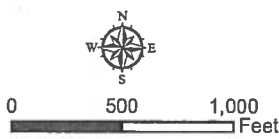
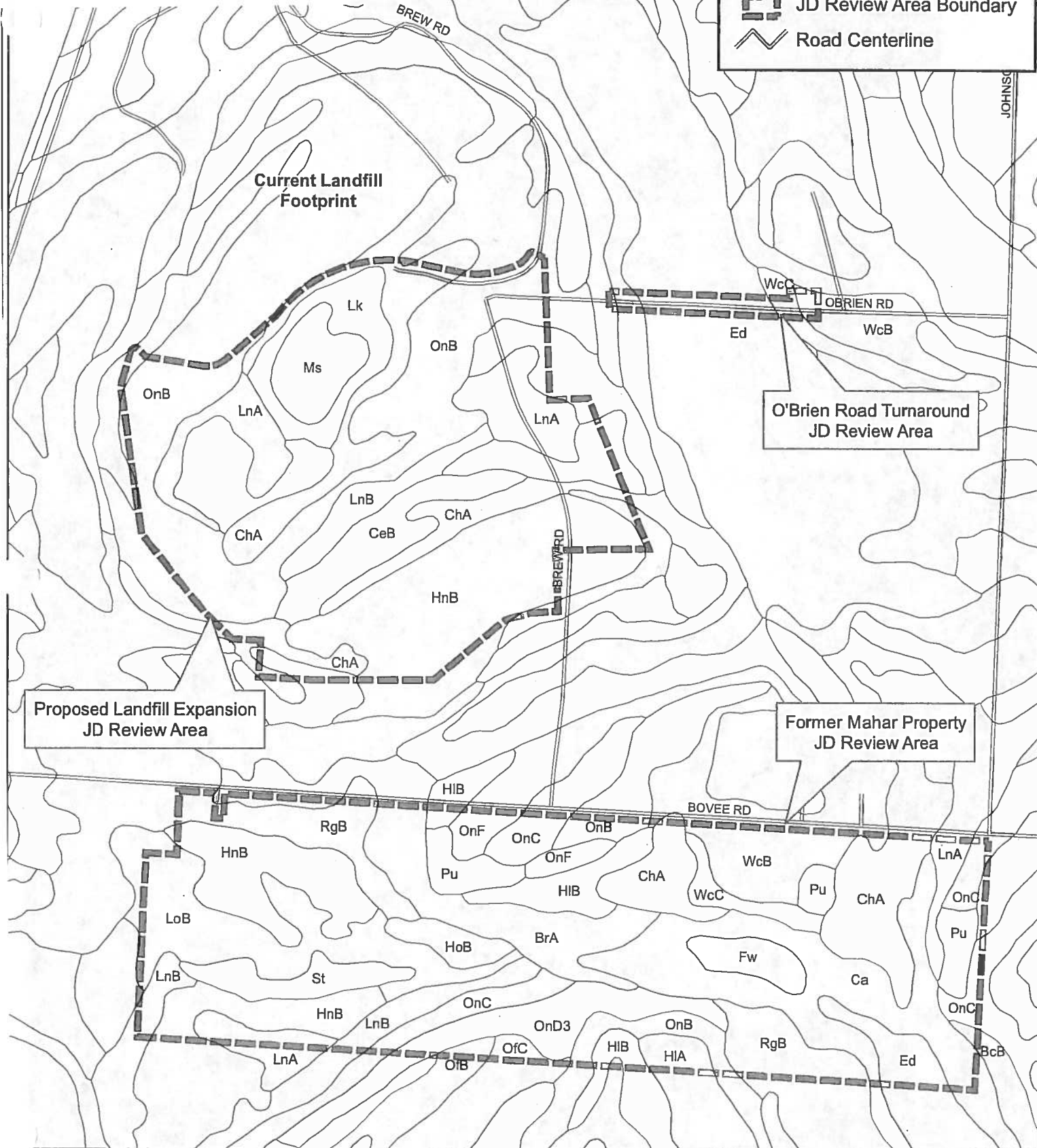
- Road Centerline
- Borrow Area Limits (prior project - JD received)
- Property Owners**
- Monroe County
- Monroe County Property (Leased to WM)
- Waste Management





**Legend**

- Mapped Soil Boundary
- JD Review Area Boundary
- Road Centerline

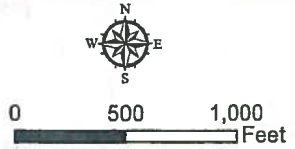
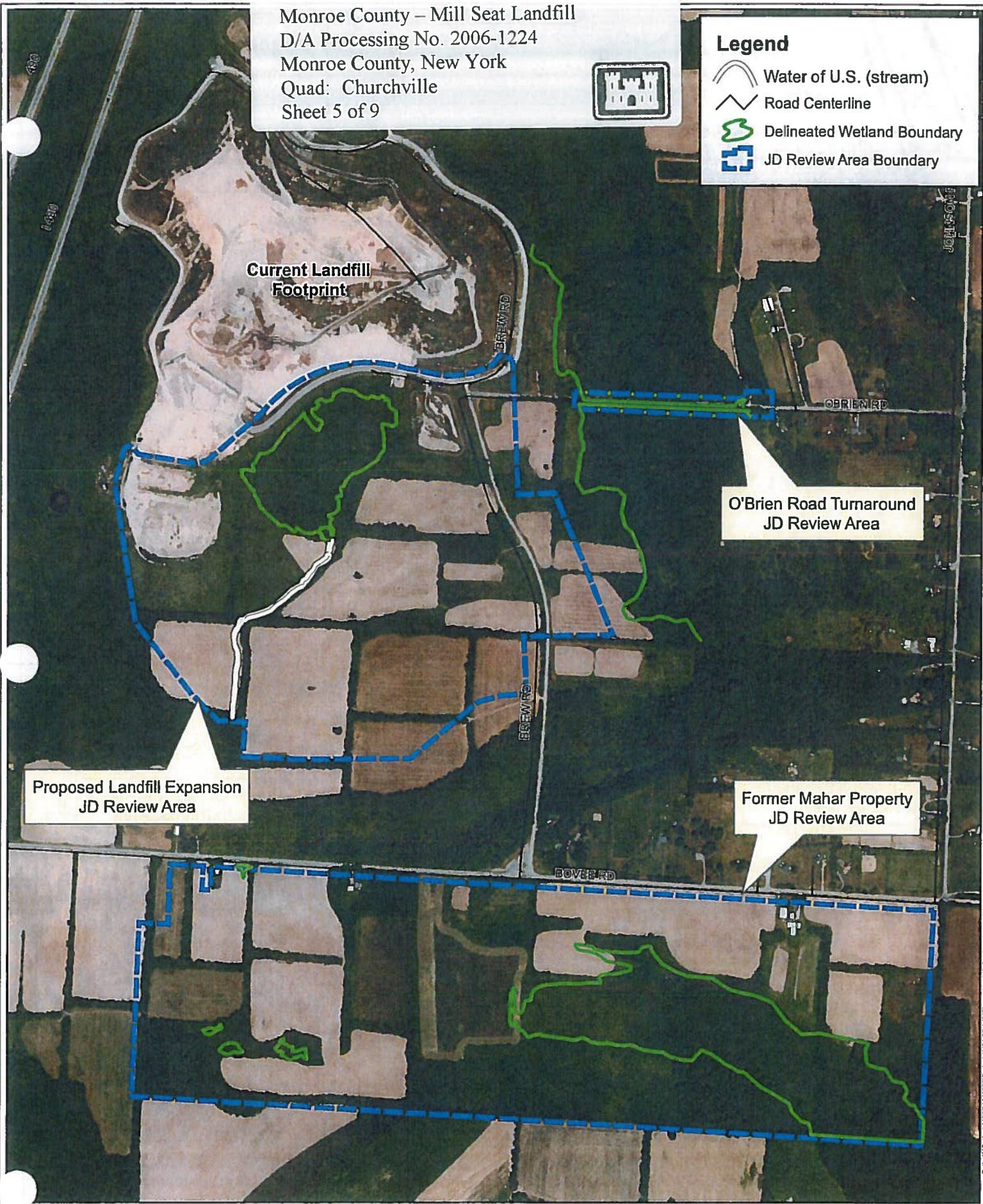


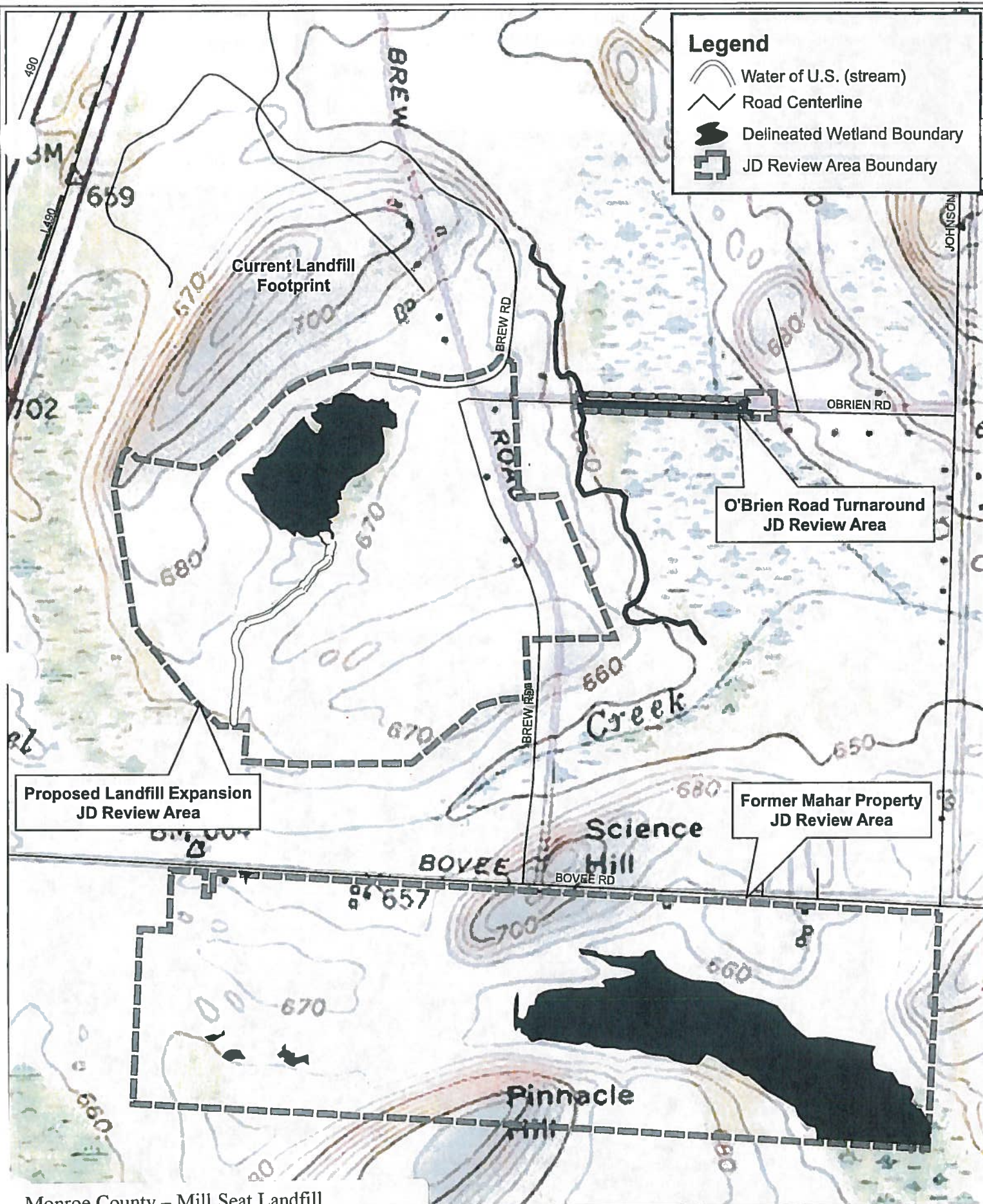
Monroe County – Mill Seat Landfill  
 D/A Processing No. 2006-1224  
 Monroe County, New York  
 Quad: Churchville  
 Sheet 5 of 9



**Legend**

- Water of U.S. (stream)
- Road Centerline
- Delineated Wetland Boundary
- JD Review Area Boundary





**Legend**

- Water of U.S. (stream)
- Road Centerline
- Delineated Wetland Boundary
- JD Review Area Boundary

Proposed Landfill Expansion  
JD Review Area

O'Brien Road Turnaround  
JD Review Area

Former Mahar Property  
JD Review Area

Monroe County – Mill Seat Landfill  
D/A Processing No. 2006-1224  
Monroe County, New York  
Quad: Churchville  
Sheet 6 of 9

Proposed Mill Seat Landfill Expansion  
AJD Documentation

**AJD Review Areas**

Monroe County    October 2013    New York

Figure  
4b

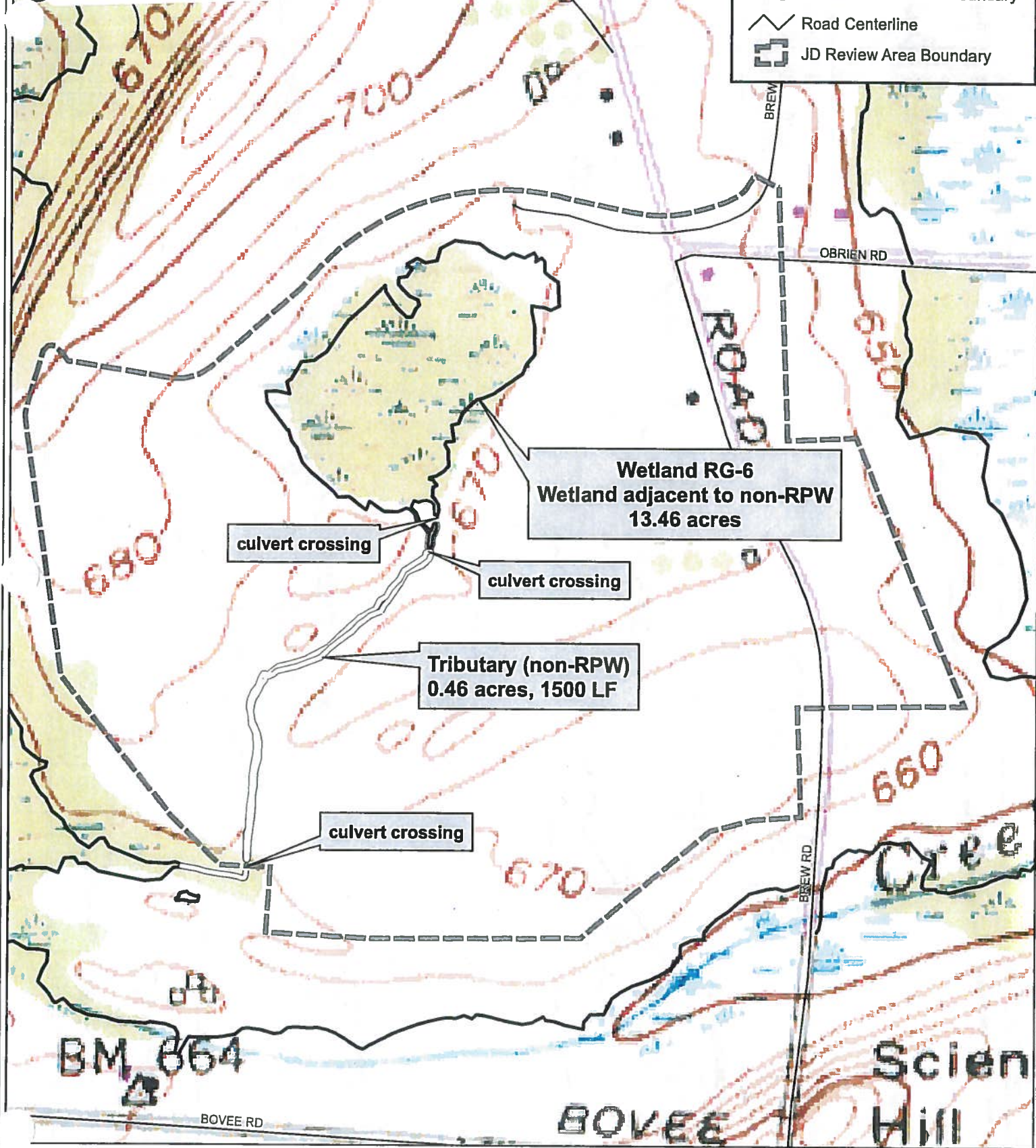
Project  
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1242.022

Monroe County – Mill Seat Landfill  
 D/A Processing No. 2006-1224  
 Monroe County, New York  
 Quad: Churchville  
 Sheet 7 of 9



**Legend**

- Waters of the U.S. (stream)
- Delineated Wetland Boundary
- Road Centerline
- JD Review Area Boundary



**Wetland RG-6**  
 Wetland adjacent to non-RPW  
 13.46 acres

culvert crossing

culvert crossing

**Tributary (non-RPW)**  
 0.46 acres, 1500 LF

culvert crossing

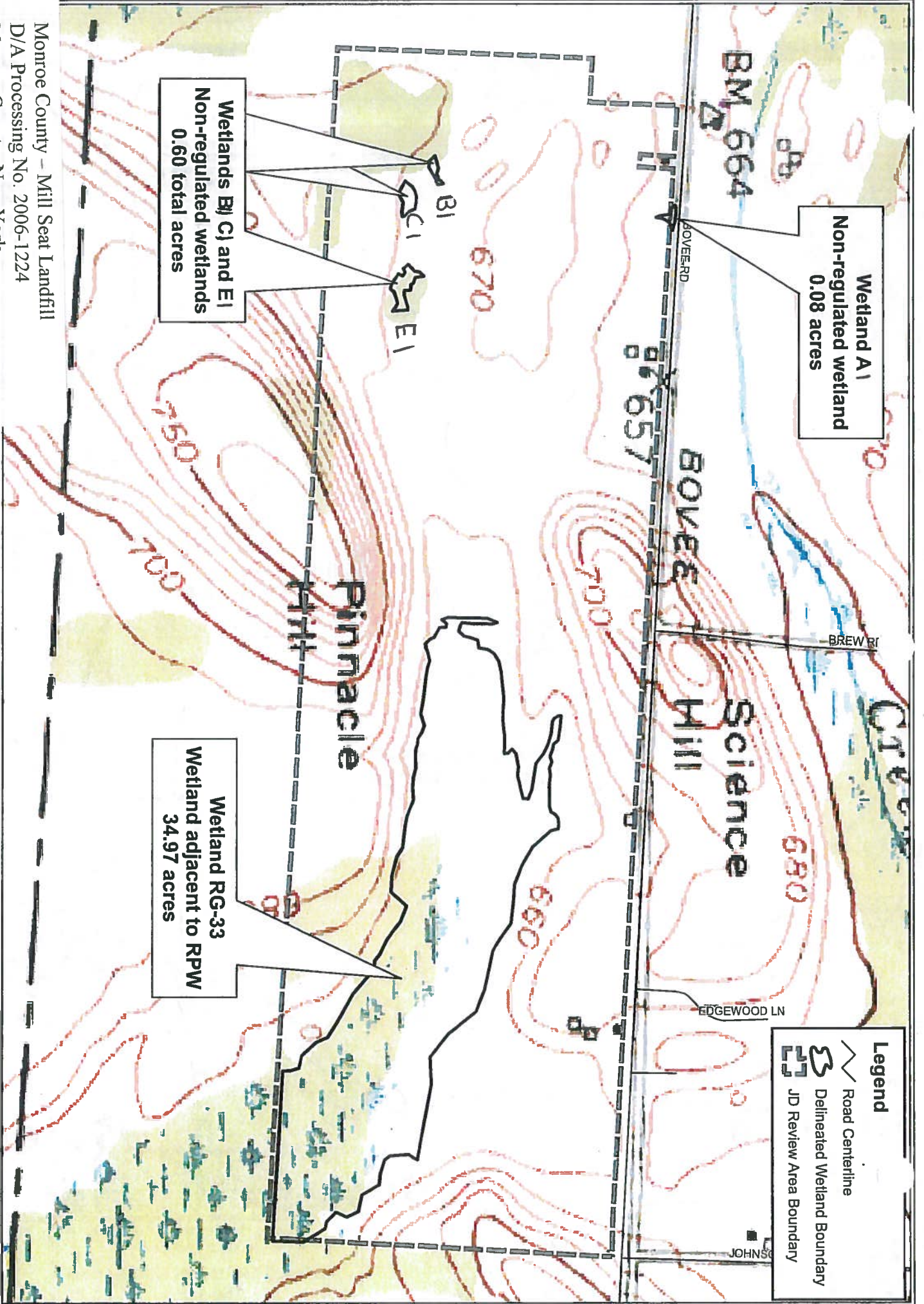


Momroe County - Mill Seat Landfill  
 D/A Processing No. 2006-1224  
 Momroe County, New York  
 Quad: Churchville



Proposed Mill Seat Landfill Expansion  
 A/D Documentation

Figure  
 5b



**Legend**

- Road Centerline
- Delineated Wetland Boundary
- JD Review Area Boundary

BREW RD

Monroe County - Mill Seat Landfill  
D/A Processing No. 2006-1224  
Monroe County, New York  
Quad: Churchville  
Sheet 9 of 9



**Legend**

- Road Centerline
- Delineated Wetland Boundary
- JD Review Area Boundary

Wetland RG-7  
Wetland directly abutting RPW  
1.40 acres

Wetland RG-7  
Wetland directly abutting RPW  
0.02 acres

Wetland RG-7  
Wetland directly abutting RPW  
1.05 acres

GERRARD RD





**Waste Management of New York, Inc.**

**Monroe County, New York**

**Wetland Delineation Report  
for the  
Proposed Mill Seat Landfill  
Soil Borrow Area Expansion**

**August 2009**

Proposed Mill Seat Landfill Soil Borrow Area Expansion

Town of Riga  
Monroe County, New York

Wetland Delineation Report

August 2009

Prepared For:

Mr. Jeff Richardson  
District Manager  
Waste Management of New York, Inc.  
303 Brew Road  
Bergen, New York 14416

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Syracuse, New York 13220

## Table of Contents

<u>Section</u>	<u>Page</u>
1.0 Introduction.....	1
2.0 Site Description .....	3
2.1 Location .....	3
2.2 Site Use .....	3
2.3 Surface Water .....	4
3.0 Agency Resource Information .....	5
3.1 USGS Topographic Quadrangle Map .....	5
3.2 Natural Resource Conservation Service Soils Information .....	5
3.3 National Wetland Inventory Map .....	7
3.4 NYSDEC Freshwater Wetlands .....	7
3.5 Results of Background Information Review .....	7
4.0 Site Ecology.....	9
4.1 Upland Vegetative Cover Types .....	9
4.2 Wetland Vegetative Cover Types .....	9
4.2.1 Forested Wetland.....	9
4.2.2 Scrub-Shrub .....	10
4.2.3 Emergent .....	10
5.0 Wetland Delineation Methodology .....	11
6.0 Results .....	15
6.1 Wetland Labeling .....	15
6.2 Delineated Wetlands.....	16
7.0 Summary and Conclusions.....	19
8.0 Bibliography.....	20

### Tables

Table 1 – Soil Survey Information .....	6
---	---

## **Table of Contents**

### Figures

- Figure 1 – Site Location Map
- Figure 2 – Topographic Site Map
- Figure 3 – NRCS Mapped Soils
- Figure 4 – NWI Wetland Mapping
- Figure 5 – NYSDEC Wetland Mapping
- Figure 6 – Delineated Wetland Mapping
- Figure 7 – Delineated Wetland Mapping – Data Plot Location
- Figure 8 – Site Photograph Locations
- Figure 9 – Proposed Soil Borrow Areas

### Appendices

- Appendix A – Wetland Field Delineation Data Sheets
- Appendix B – Site Photographs

## **1.0 Introduction**

This report describes the wetland resources located within the approximately 280-acre field delineated area, which is situated on lands owned by Monroe County and lands owned by Waste Management of New York, Inc., the operator of the Mill Seat Landfill. The Mill Seat Landfill is currently owned by Monroe County; the landfill properties total approximately 385 acres. The field wetland delineation was completed on lands south of the existing Mill Seat Landfill footprint, in the Town of Riga, Monroe County, New York (site location map, Figure 1). The field delineated area includes lands both east of west of Brew Road and a small section of land located north of O'Brien Road.

The fieldwork detailed in this report was completed in support of a proposal to modify the existing Solid Waste Management Facility Permit at the Mill Seat Landfill to construct and operate two soil borrow areas. These two areas, designated as the west borrow area and the east borrow area, have proposed areas of 20 acres and 42 acres, respectively. The soil from these proposed areas will be used to meet the demand for future construction and operation activities of the currently permitted landfill cells at the Mill Seat Landfill.

The wetlands located within the field delineated area that met the Federal wetland criteria were delineated using the methods set forth in the 1987 Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987).

This report contains a description of the project area including the site ecology, the methods used to determine the wetland boundaries, agency resource information obtained for the site, and the results of the wetland field delineation. Wetland

delineation field data sheets and photographs of the wetland resources located within the project area are found in Appendices A and B at the end of this report.

## **2.0 Site Description**

### **2.1 Location**

The Town of Riga is located in the southwest corner of Monroe County, forming the County boundary between Monroe and Genesee Counties with the Town of Bergen. The Mill Seat Landfill is located off of State Route 33A (Chili Avenue), bisecting Brew Road into two sections, a north section and a south section. The west side of the Mill Seat Landfill property abuts the right-of-way boundary for Interstate 490.

This report relates to the proposed construction of east and west soil borrow areas, to be located south of the existing landfill footprint, herein referred to as “the Project.” The field delineated area consists of lands owned by Monroe County and lands owned by Waste Management of New York, Inc. The field delineated area is depicted on site Figures 1 and 2.

### **2.2 Site Use**

Aside from the landfill, land use surrounding the project area is predominantly agricultural. Waste Management of New York, Inc., leases sections of its property and the Mill Seat Landfill property to individuals for crop production and haying. Many of these leased agricultural lands are included in the field delineated boundary and can be seen on Figure 1. Residential properties are also adjacent to the Mill Seat Landfill, particularly along O’Brien Road and Bovee Road, southeast of the existing landfill footprint. No residential properties are located within or immediately adjacent to the proposed soil borrow

areas. The lands located within the field delineated area, south of the southern limits of the proposed borrow areas, are included in agricultural district MOR02.

### 2.3 Surface Water

Two streams are mapped by the New York State Department of Environmental Conservation (NYSDEC) within or adjacent to the limits of the field delineated area, analyzed as part of the project. Hotel Creek, Ont. 117-19-9, flows eastward along the southern boundary of the field delineated area. Hotel Creek is a tributary of Black Creek, which is the nineteenth tributary of the Genesee River. Hotel Creek begins in the Town of Bergen in Genesee County, as a result of runoff from a nearby hill. Water then flows east across the county boundary, south of the proposed project area, and eventually empties into Black Creek in the Town of Riga, just north of Robertson Road. Tributary b of Hotel Creek flows south adjacent to the east side of the field delineated area. Waters, including Hotel Creek and its tributaries, located within the general area of the Mill Seat Landfill are located in the Upper Genesee River Drainage Basin.

Hotel Creek was observed in the field during the field wetland delineation and is associated with delineated Wetland A and NYSDEC mapped wetland RG-5. Tributary b of Hotel Creek was not observed in the field due to its location outside of the field delineated area; however, this water is associated with delineated Wetland D and NYSDEC mapped wetland RG-7. The locations of Hotel Creek and Tributary b are depicted on the United States Geological Survey (USGS) Churchville quadrangle (Figure 2).



### **3.0 Agency Resource Information**

Prior to undertaking the field wetland delineation, topography, mapped wetlands, and background information regarding soils were reviewed for the project area. This background information included the USGS topographic quadrangle maps (Churchville Quadrangle), National Wetland Inventory mapping (Churchville Quadrangle), NYSDEC Freshwater Wetlands map (southwestern Monroe County coverage), and soils information from the Natural Resource Conservation Service (NRCS Web Soil Survey).

#### **3.1 USGS Topographic Quadrangle Map**

The Churchville 7.5 Minute Series Topographic Quadrangle Map, last revised in 1943, was examined. As seen in Figure 2, this quadrangle shows the approximate locations of wetland areas and the location of Hotel Creek, in relation to I-490 and Brew Road.

#### **3.2 Natural Resource Conservation Service Soils Information**

The NRCS web soil survey was reviewed for information regarding the mapped soils within the project area. The acquired information shows 18 soil units mapped within the wetland delineation project limits. Figure 3 shows the boundaries of these soils mapped within the field delineated area. Table 1, below, lists the series and phases of each soil mapped within the project limits.

<b>Table 1. Soil Survey Information</b>	
<b>Soil Symbol</b>	<b>Soil Series and Phase</b>
BrA	Brockport silty clay loam, 0-2% slopes
CeB	Cayuga silt loam, 2-6% slopes
ChA	Churchville silt loam, 0-2% slopes
Ed	Edwards muck
HnB	Honeoye silt loam, 3-8% slopes
HnC	Honeoye silt loam, 8-15% slopes
Le	Lakemont silt loam
Lk	Lakemont silt loam, loamy variant
LnA	Lima silt loam, 0-3% slopes
LnB	Lima silt loam, 3-8% slopes
Ms	Muck, shallow
OnB	Ontario loam, 3-8% slopes
OnC	Ontario loam, 8-15% slopes
OnF	Ontario loam, 25-60% slopes
PaB	Palmyra gravelly fine sandy loam, 3-8% slopes
RgB	Riga silt loam, 2-8% slopes
St	Sun loam, moderately shallow variant
Wg	Wayland silt loam

Six of the mapped soils within the project area are designated as hydric soils according to the NRCS. These hydric soils include Ed – Edwards muck, Le – Lakemont silt loam, Lk – Lakemont silt loam (loamy variant), Ms – shallow Muck, St – Sun loam (moderately shallow variant), and Wg – Wayland silt loam. There are also two soil units that have the potential for hydric inclusions: Brockport silty clay loam (BrA) and Churchville silt loam (ChA). The hydric soils identified above are predominantly mapped in areas where freshwater wetlands were delineated.

### 3.3 National Wetlands Inventory Map

Figure 4 shows the mapped National Wetlands Inventory (NWI) wetlands adjacent to and within the proposed project limits. There are numerous NWI wetland polygons mapped within and adjacent to the field delineated area. These mapped polygons represent the following wetland types: palustrine emergent, palustrine scrub-shrub, palustrine forested, and palustrine unconsolidated bottom. The locations of these mapped wetlands associate themselves well with the mapped locations of NYSDEC freshwater wetlands (discussed in section 3.3) and the freshwater wetlands delineated in the field (discussed in section 6).

### 3.4 NYSDEC Freshwater Wetlands

Figure 5 shows the NYSDEC mapped freshwater wetland boundaries located within and adjacent to the limits of the proposed project area. There are three NYSDEC regulated wetlands located within the field delineated project area: RG-5, RG-6, and RG-7. RG-5 is a Class 2 wetland reported as 108.2 acres in size, RG-6 is a Class 3 wetland reported as 17.4 acres in size, and RG-7 is a Class 2 wetland detailed as being 112.6 acres in size.

### 3.5 Results of Background Information Review

The preliminary review of background information conducted prior to the wetland field investigation indicated a high probability for potential federally regulated wetlands to be located within the project area. This determination was based on the abundance of NWI and NYSDEC mapped freshwater wetlands within the project limits and the high frequency of hydric soils and soils with

potential hydric inclusions mapped within and adjacent to the project area. A field-based wetland delineation was conducted throughout the project limits to confirm the extent to which these preliminary findings are valid.

## **4.0 Site Ecology**

### **4.1 Upland Vegetative Cover Types**

The majority of land included in the project area is currently associated with agricultural practices. Therefore, most of the cover types observed within the project limits were upland meadows and fields, bordered by hedgerows and deciduous tree lines. Some areas of upland forest and shrub land were also noted within the field delineated limits, as well as some disturbed areas that are part of the Mill Seat Landfill property.

### **4.2 Wetland Vegetative Cover Types**

Wetland cover types identified within the project area include forested wetlands, scrub-shrub wetlands, and emergent wetlands. Some of the wetlands exhibited only one cover type while others demonstrated characteristics of more than one cover type.

#### *4.2.1 Forested Wetland*

Forested wetlands are dominated by woody vegetation taller than 20 feet, where soil is at least periodically saturated or covered by water. Forested wetlands within the field delineated area commonly included deciduous trees with an under story of hydrophytic herbaceous vegetation. The denseness of the understory was observed to vary by location. These wetlands were often observed bordering cultivated agricultural fields and other disturbed areas.

#### *4.2.2 Scrub-Shrub*

This wetland cover type is primarily found in areas that were formerly open or otherwise cleared. Scrub-shrub wetlands are often found in areas of shallow standing water. Woody vegetation that is less than 20 feet in height helps classify these wetlands. Within the project area, scrub-shrub wetlands were observed bordering emergent wetlands or noted as localized pockets within larger forested wetland areas.

#### *4.2.3 Emergent*

Erect, rooted, herbaceous hydrophytic plants characterize emergent wetlands. This vegetation can be observed throughout the majority of the growing season. These wetlands typically have standing water above the soil surface for a portion of the year and often include fringe communities on open water edges. Emergent wetlands were often observed in connection with scrub-shrub and wet meadow cover types. Emergent wetlands were predominantly delineated along Hotel Creek and around small open water ponds, previously constructed as wildlife habitat components, located to the east and west of the Mill Seat Landfill, within delineated Wetlands A and B.

## **5.0 Wetland Delineation Methodology**

The background data described in Section 3 was reviewed prior to conducting the wetland field investigation. The Routine Wetlands Determination Method with Onsite Inspection (Environmental Laboratory, 1987) was used to identify wetlands and Waters of the United States located within the project area, which are subject to jurisdiction by the U.S. Army Corps of Engineers (USACE) and/or the NYSDEC.

Barton & Loguidice, P.C. (B&L), performed data collection and delineation of the wetland boundaries during fieldwork conducted on November 10-14, 2008, and June 8, 2009. Observations of vegetative communities, soil characteristics, and hydrology were recorded and used to demarcate the wetland boundaries in the field.

All of the data collected during the field wetland delineation were recorded on data sheets (located in Appendix A). The boundaries of all four (4) wetlands, designated with letters "A" through "D," that were identified during the wetland delineation are mapped on Figure 6. Figure 7 also shows the boundaries of the delineated wetlands, along with the data plot locations detailed in Appendix A. Upland and wetland data plots were recorded at representative wetland locations in order to illustrate the site characteristics that led to the establishment of the wetland boundaries in the field.

The first step in the wetland delineation was to determine whether normal conditions were present at each identified wetland location and whether any of the wetland sites were located within potential problem areas. Each location was then examined for significant disturbance, particularly any evidence of natural or human induced alteration of vegetation, soils, or hydrology. These investigations were followed by analyzing the surrounding area and determining where the wetland/upland interface

lay. Vegetation, hydrology, and soils were examined in the field at selected points in order to help determine the location of this boundary.

The presence of wetland vegetation was determined by evaluating the indicator status of dominant plant species in each vegetative stratum (i.e., herbaceous layer, shrub/sapling layer, tree layer, and woody vine layer). The quadrat sizes selected for each vegetative stratum were a 5-foot radius for herbaceous vegetation and a 30-foot radius for trees, shrubs, and woody vines. Dominant plant species were determined using percent aerial coverage estimates. The most abundant plant species (when ranked in descending order of abundance and cumulatively totaled) that immediately exceeded 50 percent of the total dominance measure for a given stratum, plus any additional species comprising 20 percent or more of the total dominance measure for that stratum, were considered to be dominant species for the stratum.

The wetland indicator status (obligate - OBL, facultative wetland - FACW, facultative - FAC, facultative upland - FACU, or upland - UPL) for all dominant plant species identified in the sample plots was determined from the National List of Plant Species That Occur in Wetlands: 1988 National Summary (U.S. Fish and Wildlife Service, 1988). The wetland vegetation criterion was met if greater than 50 percent of the dominant plants in a sample plot had an indicator status of OBL, FACW, and/or FAC.

Plant community data recorded at each data plot are included on the wetland delineation field data sheets found in Appendix A.

The presence of primary hydrologic indicators (such as inundation, watermarks, drift lines, or sediment deposits) or secondary hydrologic indicators (such as oxidized root channels in the upper 12-inches of the soil profile, water stained leaves, or the FAC



neutral test) was determined by making observations at the data plot locations and surrounding areas. Soil saturation was determined by sampling the soils at a minimum depth of 12-inches, if possible. These soil test holes were observed in order to record the depth to which water rose in the hole. Hydrologic data gathered in the field at each data plot is included on the wetland delineation field data sheets found in Appendix A.

The presence of hydric soil indicators was determined by obtaining soil samples, by the use of a soil auger, up to a minimal depth of 12-inches, if possible. Munsell Soil Color Charts (2000 Edition) were used to determine soil color immediately below the A-horizon, or at a depth of 12-inches, whichever was shallower. Soil color was also determined for the B-horizon and the C-horizon, if present. Soil color information and other observations recorded at each data plot location are included on the wetland delineation field data sheets found in Appendix A.

A wetland determination was made at each data plot after characterizing vegetation, hydrologic indicators, and soil characteristics. If the hydrophytic vegetation, hydrology, and hydric soil criteria were met, the area was determined to be a wetland. If the criteria from one or more of the three-wetland indicators was not met, and the area was determined to be undisturbed, then a non-wetland determination was made at that location.

The boundaries of each wetland location were surveyed in the field using a handheld Global Positioning System (GPS). A Trimble GeoXT model with sub-meter accuracy was used to identify each point location and map the delineated wetland boundaries. These wetland boundaries were later added to the Geographic Information System (GIS) base mapping for the project.

Representative photographs taken at wetland locations throughout the field delineated area are included in Appendix B. Figure 8 shows the locations and directions of these photographs.

## **6.0 Results**

### **6.1 Wetland Labeling**

The wetland field delineation for this project occurred on November 10-14, 2008, and June 8, 2009. Over the course of this field delineation, four wetland areas were identified and delineated within the limits of the field delineated area (Figure 6). Four wetlands were delineated within the project limits, three (3) of these wetlands, Wetlands A, B, and D, are associated with mapped streams or drainages. The fourth delineated wetland area, Wetland C, was observed to be potentially isolated from other wetlands and waters. No defined inlets or outlets for this wetland were observed in the field.

Wetlands were identified alphabetically from A to D. Data plots locations were situated within representative areas at each delineated wetland. Wetland delineation datasheets are included in Appendix A. The total acreage of Wetlands B and C could be determined from the delineation since their entire boundaries are located within the field delineated area. The acreages of these two wetlands were calculated at 12.54 acres for Wetland B and 0.76 acres for Wetland C. The total acreages for Wetland A and D could not be determined since their boundaries extended outside of the field delineated area.

## 6.2 Delineated Wetlands

### *Wetland A*

Wetland A is located along the west and south boundaries of the field delineated area. Hotel Creek is included within this wetland system and was observed in the field. Hotel Creek is determined to be a relatively permanent water (RPW) and Wetland A constitutes a wetland area that directly abuts and flows into an RPW. Hotel Creek passes through a culvert crossing near the farm buildings located on the north side of Bovee Road, south of Wetland A. This crossing provides equipment access to the agricultural fields located within the field delineated area. Though located outside of the field delineated area, Wetland A and Hotel Creek continue to flow east of Brew Road, via a culvert underneath the roadway.

Two data plots were recorded for Wetland A. The data sheets detailing the vegetative, hydrologic, and soil characteristics of these two locations are included in Appendix A.

### *Wetland B*

Wetland B is located immediately south of the existing Mill Seat Landfill footprint, in between the proposed locations of the east and west soil borrow areas. An existing sedimentation pond abuts Wetland B to the east and outlets water to Wetland B through a culvert. This additional water source has expanded the northeast corner of Wetland A, based on previous site delineations and the shape of the wetland boundary near the outfall location. During periods of high flow, water from Wetland B drains

south by means of a linear wetland drainage. This linear drainage was delineated in the field and averages 10-feet in width. Water flow from Wetland B passes through a culvert before entering the linear drainage. The drainage ends at a pair of ceramic culverts located adjacent to a section of deciduous forest located near the southwest corner of the field delineated area (Figure 6). A defined channel or flow pathway was not observed in the field after the locations of the ceramic culverts. It was observed that water exiting the ceramic culverts appears to sheet flow into the forested area. Both of these culvert sets were initially installed to provide access to adjacent agricultural fields. Currently, only the southern field access is frequently used. If the wetland drainage section of Wetland B is determined to be non-jurisdictional by the U.S. Army Corps, then Wetland B has the potential to be determined isolated. This determination would not change the fact that Wetland B is under jurisdiction by the NYSDEC.

Two data plots were recorded for Wetland B. The data sheets detailing the vegetative, hydrologic, and soil characteristics of these two locations are included in Appendix A.

### *Wetland C*

Wetland C is a small, scrub-shrub wetland that was determined in the field to be isolated. No inlets or outlets were observed around the perimeter of this wetland, leading to the isolated determination. Wetland C is located just east of Brew Road, south of O'Brien Road. Wetland C is located among a patch of saplings and shrubs that are surrounded by abandoned agricultural fields.

One data plot was recorded for Wetland C. The data sheet detailing the vegetative, hydrologic, and soil characteristics of this location are included in Appendix A.

#### *Wetland D*

Wetland D is located along the eastern edge of the field delineated area. This wetland begins north of O'Brien Road, passes through a culvert underneath the roadway, and continues south. Tributary b of Hotel Creek is located within the delineated limits of Wetland D. This Tributary is a RPW. The northern limits of Wetland D are also recognized as a significant natural community called silver maple-ash swamp. The majority of Wetland D is forested; however, scattered emergent pockets can be seen from the aerial photography, a couple of which were observed during the field delineation. Wetland D and Tributary b continue to flow south/southeast outside of the field delineated area.

Three data plots were recorded for Wetland D. The data sheets detailing the vegetative, hydrologic, and soil characteristics of these locations are included in Appendix A.

## **7.0 Summary and Conclusions**

Four wetland areas, that met the Federal definition for wetlands, were identified within the field delineated area. Hydrologic connections were observed in the field for delineated Wetlands A and D. Wetlands B and C will need to be reviewed by the USACE to determine the extent of their jurisdiction over these areas. The NYSDEC has jurisdiction over Wetlands A, B, and D, since these wetlands represent RG-5, RG-6, and RG-7, which are included on the NYSDEC freshwater wetland mapping. It is unlikely that the NYSDEC would take jurisdiction over Wetland C due to its size. Also, during a meeting with NYSDEC personnel on April 24, 2009, it was implied that it would be unlikely that the Department would take jurisdiction over the wetland drainage that serves as the outlet for delineated Wetland B.

A field meeting is planned for August 11, 2009. During this meeting, the field delineated area will be traversed and the USACE and NYSDEC will review the wetland delineation and the extent of their agency's jurisdiction over the delineated wetland areas. At this time, no wetland impacts or impacts to the NYSDEC regulated 100-foot buffer would occur as a result of the proposed soil borrow areas. The proposed locations of the borrow areas in relation to the delineated wetlands are shown on Figure 9.

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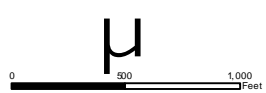


## **Figures**

**Figure 1**  
**Site Location Map**

# Legend




-  Road Centerline
-  Field Delineated Area (Approx. 280-acres)
-  Tax Parcel Boundary

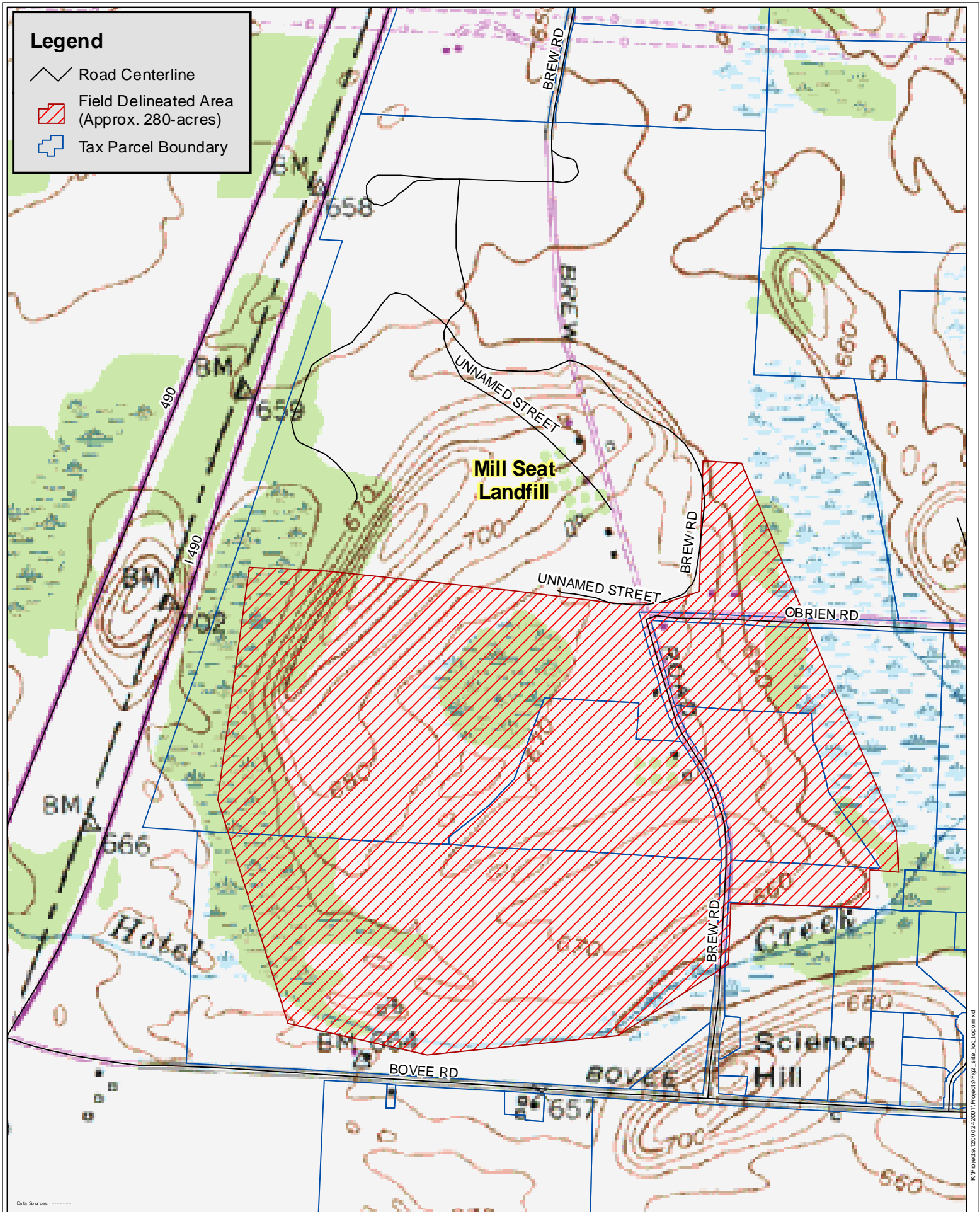


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**Figure 2**  
**Topographic Site Map**

# Legend

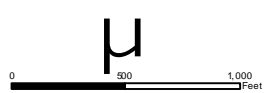
-  Road Centerline
-  Field Delineated Area (Approx. 280-acres)
-  Tax Parcel Boundary



Data Sources: .....



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Waste Management of New York, LLC  
Topographic Site Location  
Monroe County 07/23/09 New York

Figure 2  
Project No. 1242.001

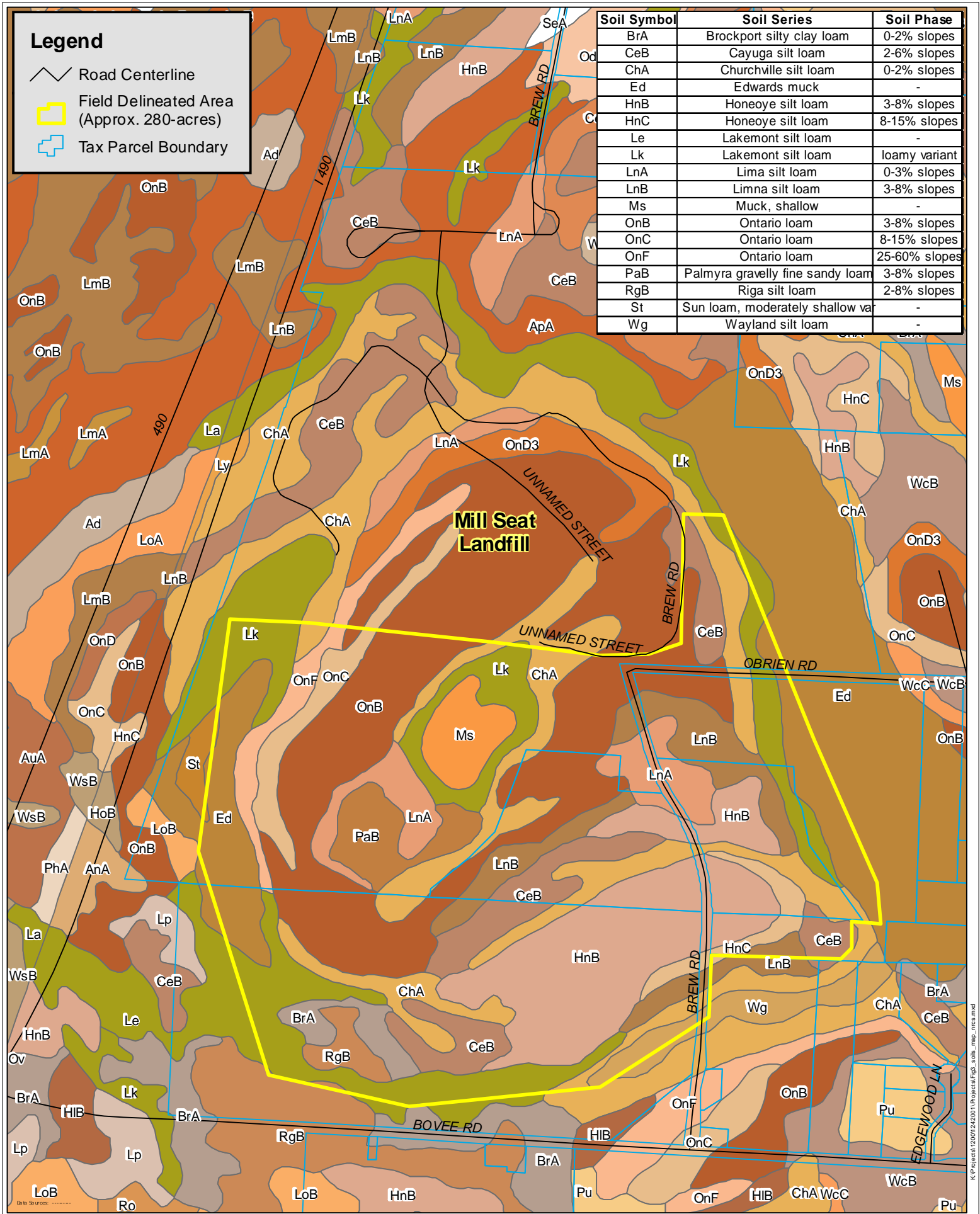
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**Figure 3**  
**NRCS Mapped Soils**

# Legend

-  Road Centerline
-  Field Delineated Area (Approx. 280-acres)
-  Tax Parcel Boundary

Soil Symbol	Soil Series	Soil Phase
BrA	Brockport silty clay loam	0-2% slopes
CeB	Cayuga silt loam	2-6% slopes
ChA	Churchville silt loam	0-2% slopes
Ed	Edwards muck	-
HnB	Honeoye silt loam	3-8% slopes
HnC	Honeoye silt loam	8-15% slopes
Le	Lakemont silt loam	-
Lk	Lakemont silt loam	loamy variant
LnA	Lima silt loam	0-3% slopes
LnB	Limna silt loam	3-8% slopes
Ms	Muck, shallow	-
OnB	Ontario loam	3-8% slopes
OnC	Ontario loam	8-15% slopes
OnF	Ontario loam	25-60% slopes
PaB	Palmyra gravelly fine sandy loam	3-8% slopes
RgB	Riga silt loam	2-8% slopes
St	Sun loam, moderately shallow va	-
Wg	Wayland silt loam	-



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**Figure 4**  
**NWI Wetland Mapping**

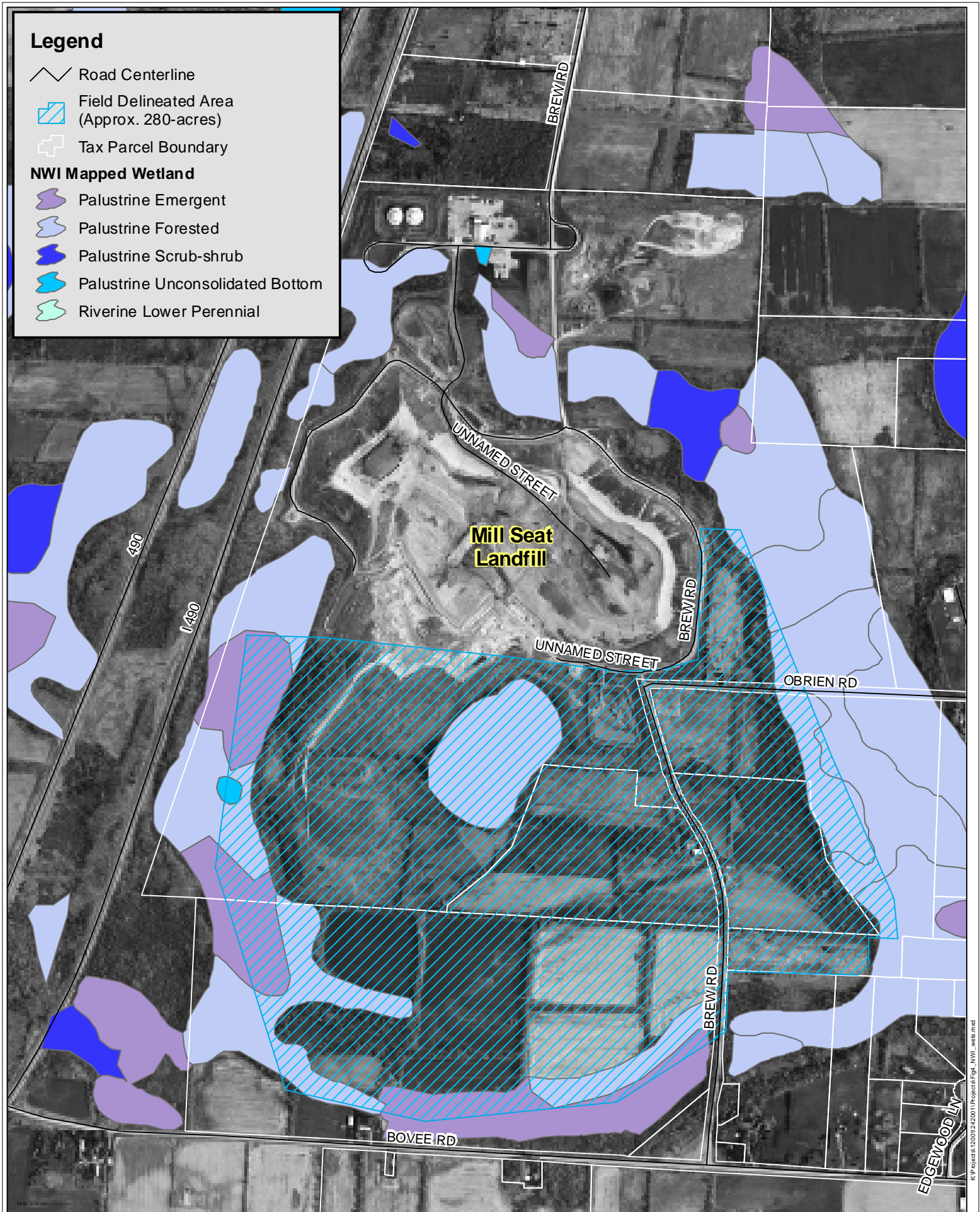


# Legend

- Road Centerline
- Field Delineated Area (Approx. 280-acres)
- Tax Parcel Boundary





## NWI Mapped Wetland

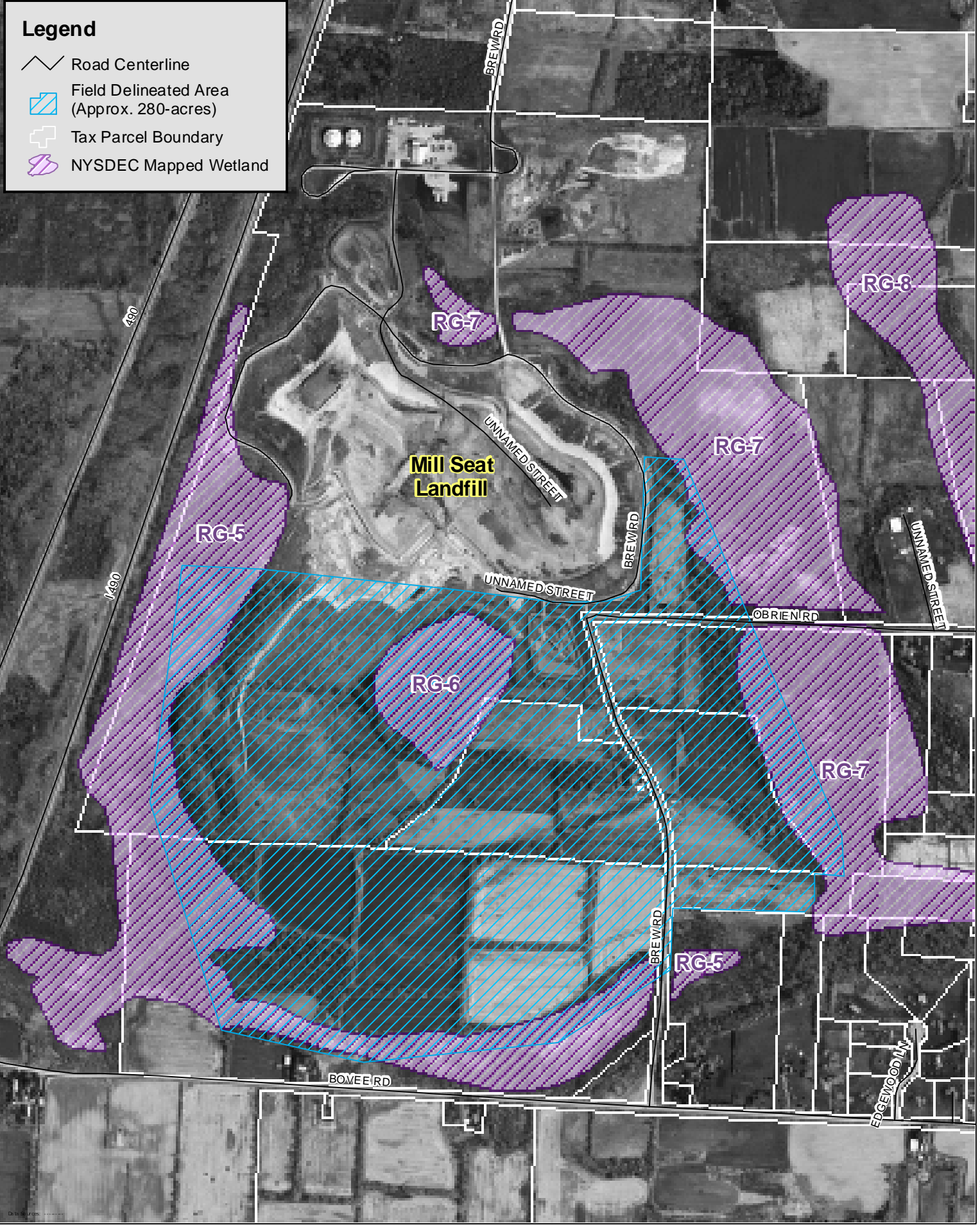
- Palustrine Emergent
- Palustrine Forested
- Palustrine Scrub-shrub
- Palustrine Unconsolidated Bottom
- Riverine Lower Perennial



**Figure 5**  
**NYSDEC Wetland Mapping**

# Legend




-  Road Centerline
-  Field Delineated Area (Approx. 280-acres)
-  Tax Parcel Boundary
-  NYSDEC Mapped Wetland

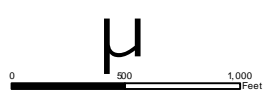
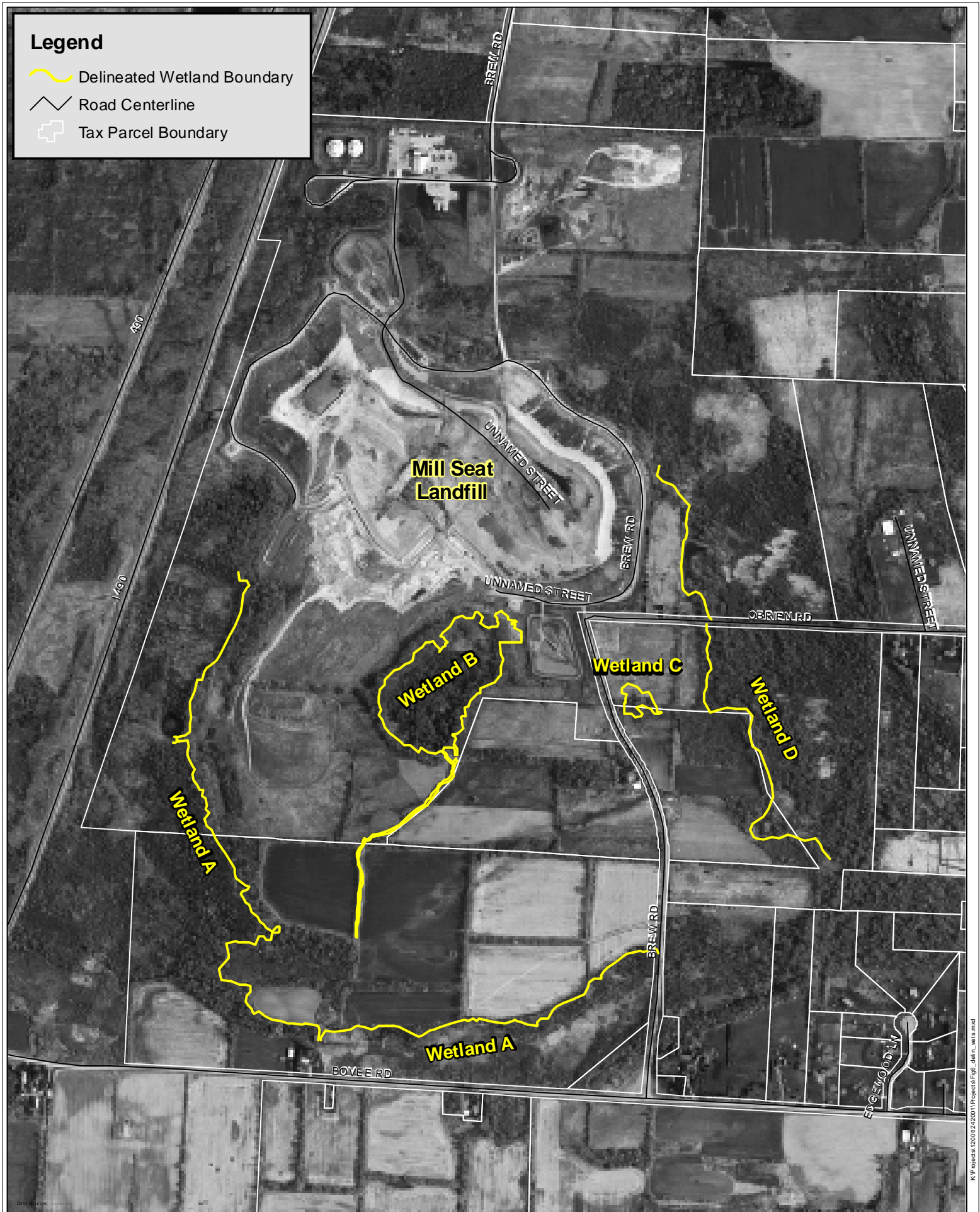


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**Figure 6**  
**Delineated Wetland Mapping**

# Legend

-  Delineated Wetland Boundary
-  Road Centerline
-  Tax Parcel Boundary



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**Figure 7**  
**Delineated Wetland Mapping**  
**Data Plot Locations**

**Legend**

- Delineated Wetland Boundary
- Road Centerline
- Tax Parcel Boundary

**Mill Seat  
Landfill**



Sources: Sources 2005 Orthomage, NYS GIS Clearinghouse  
 Road Centerlines Delineated Wetland Boundaries Data Plot  
 BSL Tax Parcel Boundaries Real Property Tax Service Agency



Waste Management of New York, LLC		Figure
Delineated Wetland Mapping Data Plot Locations		7
Monroe County	07/23/09	Project No. 1242.001
New York		

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**Figure 8**  
**Site Photograph Locations**



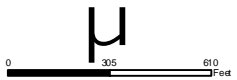
**Legend**

- Photograph Location
- Delineated Wetland Boundary
- Road Centerline
- Tax Parcel Boundary

**Mill Seat  
Landfill**



Sources: Sources 2005 Orthomage, NYS GIS Clearinghouse  
 Road Centerlines Delineated Wetland Boundaries Photo Logs  
 BSL Tax Parcel Boundaries Real Property Tax Service Agency

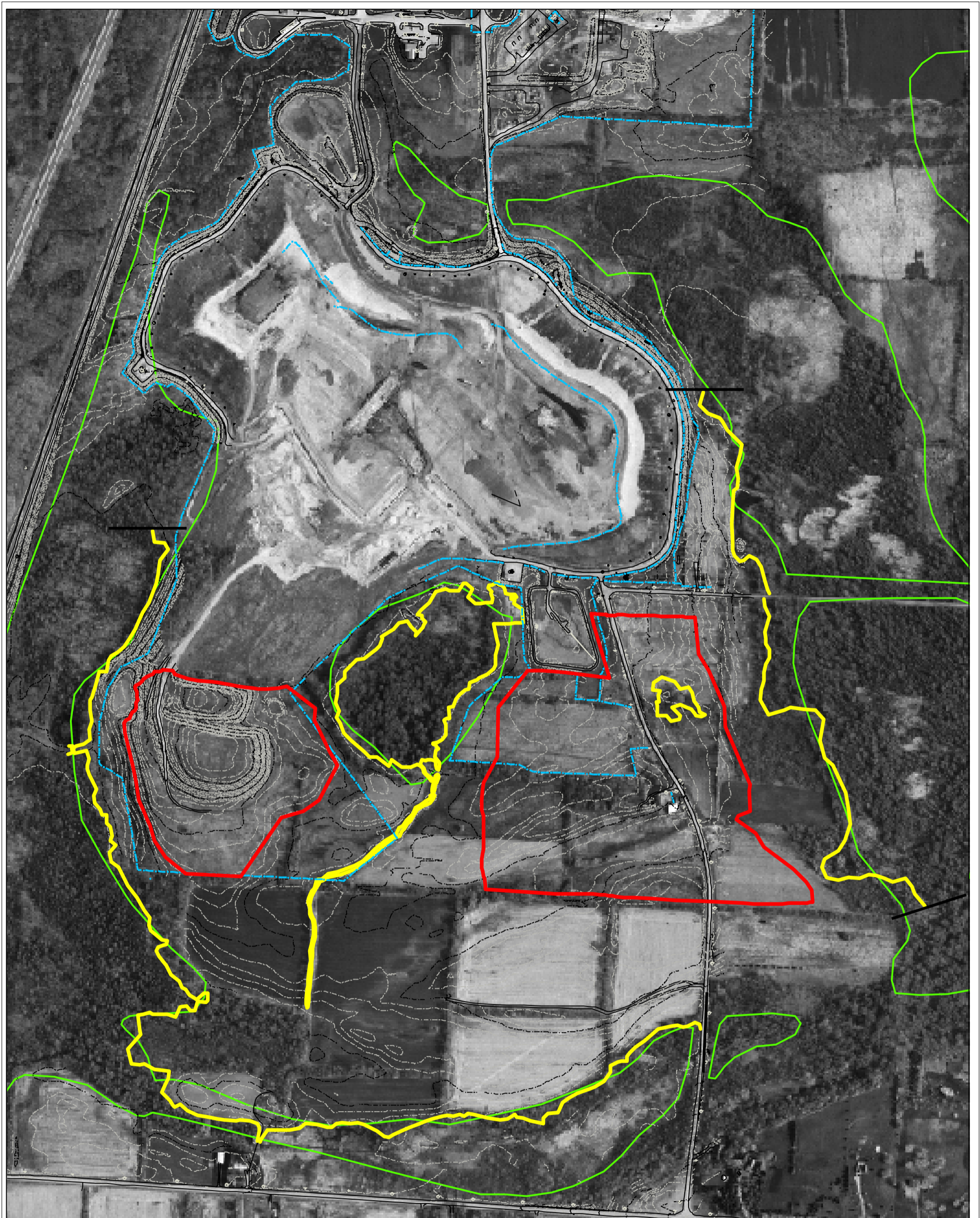





Waste Management of New York, LLC	
Site Photograph Locations	
Monroe County	New York
08/04/09	

Figure 8
Project No. 1242.001

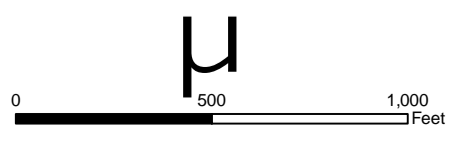
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**Figure 9**  
**Proposed Soil Borrow Areas**



- Legend**
-  Fence line
  -  Proposed Borrow Area Limits
  -  Delineated Wetland Boundary
  -  NYSDEC Mapped Wetland

Sources: 2005 Orthoimagery - NYS GIS Clearinghouse; Road Centerline, Delineated Wetland Boundaries - B&L; Tax Parcel Boundaries - Real Property Tax Service Agency; Proposed Soil Borrow Areas, Fence Line - McMahon & Mann



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## **Appendices**

**Appendix A**  
**Wetland Field Delineation Data Sheets**





**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Mill Seat Landfill</u>		Date: <u>6/8/2009</u>
Applicant/Owner: <u>Waste Management</u>		County: <u>Monroe</u>
Investigator: <u>JED</u>		State: <u>New York</u>
Do normal circumstances exist on the site?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>upland herbaceous</u>
Is the site significantly disturbed (atypical situation)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Transect ID: <u>gg-13 (3u)</u>
Is the area a potential problem area? (if needed, explain on reverse)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Plot ID: <u>Upl D (3)</u>

**VEGETATION**

<u>Dominant Plant Species</u>	<u>Stratum</u>	<u>Indicator</u>	<u>Dominant Plant Species</u>	<u>Stratum</u>	<u>Indicator</u>
1. <u>Solidago sp.</u>	<u>H</u>	<u>-</u>	9. _____	_____	_____
2. <u>Clematis virginiana</u>	<u>V</u>	<u>FAC</u>	10. _____	_____	_____
3. <u>Rubus idaeus</u>	<u>H</u>	<u>FAC-</u>	11. _____	_____	_____
4. <u>Equisetum arvense</u>	<u>H</u>	<u>FAC</u>	12. _____	_____	_____
5. <u>Poa pratensis</u>	<u>H</u>	<u>FACU</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-)      2 out of 4 = 50%

Remarks: dominance of hydrophytic vegetation not exhibited

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators:</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b>  Depth of Surface Water: <u>0.0</u> (in.)  Depth to Free Water in Pit: <u>&gt;12.0</u> (in.)  Depth to Saturated Soil: <u>&gt;12.0</u> (in.)	
Remarks: <u>no hydrologic indicators present</u>	



**SOILS**

Upl D (3)

Map Unit Name (Series and Phase): <u>HnC: Honeoye silt loam</u>		Drainage Class: <u>very well drained</u>			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type?    Yes    No			
<b>Profile Description:</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>0-12+"</u>	<u>A</u>	<u>10 YR 4/3</u>	<u>-</u>	<u>-</u>	<u>loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
<b>Hydric Soil Indicators:</b>					
_____ Histosol		_____ Concretions			
_____ Histic Epipedon		_____ High Organic Content in Surface Layer Sandy Soils			
_____ Sulfidic Odor		_____ Organic Streaking in Sandy Soils			
_____ Aquic Moisture Regime		_____ Listed on Local Hydric Soils List			
_____ Reducing Conditions		_____ Listed on National Hydric Soils List			
_____ Gleyed or Low-Chroma Colors		_____ Other (Explain in Remarks)			
Remarks: <p style="text-align: center;">hydric soil criteria not met</p>					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	Yes	<b>No</b>	(Circle)  Is this Sampling Point Within a Wetland?    Yes    No
Wetland Hydrology Present?	Yes	<b>No</b>	
Hydric Soils Present?	Yes	<b>No</b>	
Remarks: <p>this plot is located at the edge of an active crop field there is a significant change in elevation from the upland plot for wetland D and the wetland plot</p>			



**SOILS**

Wetland A (2)

Map Unit Name (Series and Phase): <u>Ed: Edwards Muck</u>		Drainage Class: <u>very poorly drained</u>			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type?    Yes    No			
<b>Profile Description:</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-10"	A	10 YR 2/1	-	-	sandy clay loam
10+ "	B	10 YR 5/1	10 YR 5/8	CMD	sandy clay loam
<b>Hydric Soil Indicators:</b>					
	<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions		
	<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer Sandy Soils		
	<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils		
	<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List		
	<input checked="" type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List		
	<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)		
Remarks: <p style="text-align: center;">hydric soil criteria met</p>					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	<b>Yes</b>	No	
Wetland Hydrology Present?	<b>Yes</b>	No	(Circle)
Hydric Soils Present?	<b>Yes</b>	No	Is this Sampling Point Within a Wetland? <b>Yes</b> No
Remarks:  Wetland A is associated with NYSDEC mapped wetland RG-5 Wetland A is associated with Hotel Creek and its on-site tributary Wetland A is a forested wetland throughout its western extent and turns into an emergent closer to Brew Road			

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Mill Seat Landfill</u> Applicant/Owner: <u>Waste Management</u> Investigator: <u>JED</u>	Date: <u>11/14/2008</u> County: <u>Monroe</u> State: <u>New York</u>
Do normal circumstances exist on the site? <b>Yes</b> <b>No</b> Is the site significantly disturbed (atypical situation)? <b>Yes</b> <b>No</b> Is the area a potential problem area? (if needed, explain on reverse) <b>Yes</b> <b>No</b>	Community ID: <u>forested</u> Transect ID: <u>Wet A</u> Plot ID: <u>Upl A (2)</u>

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Acer rubrum</u>	<u>T</u>	<u>FAC</u>	9. _____	_____	_____
2. <u>Acer saccharum</u>	<u>T</u>	<u>FACU-</u>	10. _____	_____	_____
3. <u>Ostrya virginiana</u>	<u>S/T</u>	<u>FACW</u>	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-)                    2 out of 3 = 66%

Remarks: dominance of hydrophytic vegetation exhibited

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> <u>X</u> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators: <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input checked="" type="checkbox"/> <u>X</u> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations:  Depth of Surface Water: <u>0.0</u> (in.)  Depth to Free Water in Pit: <u>&gt;12.0</u> (in.)  Depth to Saturated Soil: <u>&gt;12.0</u> (in.)	
Remarks: <u>hydrologic criteria not met</u>	

**SOILS**

Upl A (2)

Map Unit Name (Series and Phase): <u>Ed: Edwards Muck</u>		Drainage Class: <u>very poorly drained</u>			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type? Yes / <b>No</b>			
<b>Profile Description:</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>0-9"</u>	<u>A</u>	<u>10 YR 4/2</u>	<u>-</u>	<u>-</u>	<u>loam</u>
<u>9+"</u>	<u>B</u>	<u>10 YR 4/2</u>	<u>10 YR 3/4</u>	<u>CFF</u>	<u>clay loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
<b>Hydric Soil Indicators:</b>					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <p style="text-align: center;">hydric soil criteria met</p>					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	<b>Yes</b>	No	(Circle)  Is this Sampling Point Within a Wetland?    Yes    No
Wetland Hydrology Present?	<b>Yes</b>	<b>No</b>	
Hydric Soils Present?	<b>Yes</b>	No	
Remarks:			



**SOILS**

Wetland B

Map Unit Name (Series and Phase): <u>ChA: Churchville silt loam, 0-2% slopes</u>		Drainage Class: <u>SW poorly</u>			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type?    Yes    No			
<b>Profile Description:</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-7"	A	10 YR 2/1	-	-	silt loam
7-12+"	B	10 YR 4/1	10 YR 5/6	MMD	sandy clay loam
<b>Hydric Soil Indicators:</b>					
	<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions		
	<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer Sandy Soils		
	<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils		
	<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List		
	<input checked="" type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List		
	<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)		
Remarks: <p style="text-align: center;">hydric soil criteria met</p>					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	<b>Yes</b>	No	(Circle)  Is this Sampling Point Within a Wetland? <b>Yes</b> No
Wetland Hydrology Present?	<b>Yes</b>	No	
Hydric Soils Present?	<b>Yes</b>	No	
Remarks:  Wetland B is associated with NYSDEC mapped wetland RG-6 this wetland drains south via a drainage channel flow from the nearby sediment pond is received into Wetland B Wetland B is located in a depressional area and receives the majority of its water from precipitation			

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Mill Seat Landfill</u>	Date: <u>11/10/2008</u>
Applicant/Owner: <u>Waste Management</u>	County: <u>Monroe</u>
Investigator: <u>JED</u>	State: <u>New York</u>
Do normal circumstances exist on the site? <b>Yes</b> <b>No</b>	Community ID: <u>Herbaceous meadow</u>
Is the site significantly disturbed (atypical situation)? <b>Yes</b> <b>No</b>	Transect ID: <u>B-42 (1u)</u>
Is the area a potential problem area? <b>Yes</b> <b>No</b>	Plot ID: <u>Upl B</u>
(if needed, explain on reverse)	

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Aster sp.	H	-	9.		
2. Rhamnus cathartica	H	UPL	10.		
3. Coptis trifolia	H	FACW	11.		
4. Acer rubrum	S/T	FAC	12.		
5. Solidago canadensis	H	FACU	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-)      2 out of 2 = 50%

Remarks:  
dominance of hydrophytic vegetation not exhibited

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators:</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b> Depth of Surface Water: <u>0.0</u> (in.) Depth to Free Water in Pit: <u>&gt;12.0</u> (in.) Depth to Saturated Soil: <u>7.0</u> (in.)	
Remarks: hydrologic indicators observed	



**SOILS**

Upl B

Map Unit Name (Series and Phase): <u>ChA: Churchville silt loam, 0-2% slopes</u>		Drainage Class: <u>SW poorly</u>			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type?    Yes    No			
<b>Profile Description:</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>0-7"</u>	<u>A</u>	<u>10 YR 3/1</u>	<u>-</u>	<u>-</u>	<u>silt loam</u>
<u>7-12+"</u>	<u>B</u>	<u>10 YR 5/2</u>	<u>10 YR 6/4</u>	<u>CMF</u>	<u>sandy loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
<b>Hydric Soil Indicators:</b>					
<input type="checkbox"/>	Histosol	<input type="checkbox"/>	Concretions		
<input type="checkbox"/>	Histic Epipedon	<input type="checkbox"/>	High Organic Content in Surface Layer Sandy Soils		
<input type="checkbox"/>	Sulfidic Odor	<input type="checkbox"/>	Organic Streaking in Sandy Soils		
<input type="checkbox"/>	Aquic Moisture Regime	<input type="checkbox"/>	Listed on Local Hydric Soils List		
<input checked="" type="checkbox"/>	Reducing Conditions	<input type="checkbox"/>	Listed on National Hydric Soils List		
<input checked="" type="checkbox"/>	Gleyed or Low-Chroma Colors	<input type="checkbox"/>	Other (Explain in Remarks)		
Remarks: <p style="text-align: center;">hydric soil criteria met</p>					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	Yes	No	(Circle)  Is this Sampling Point Within a Wetland?    Yes    No
Wetland Hydrology Present?	Yes	No	
Hydric Soils Present?	Yes	No	
Remarks:			

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Mill Seat Landfill</u>		Date: <u>11/13/2008</u>
Applicant/Owner: <u>Waste Management</u>		County: <u>Monroe</u>
Investigator: <u>TJP</u>		State: <u>New York</u>
Do normal circumstances exist on the site?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>Emergent</u>
Is the site significantly disturbed (atypical situation)?	<input type="checkbox"/> Yes <input type="checkbox"/> No	Transect ID: <u>4</u>
Is the area a potential problem area? (if needed, explain on reverse)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Plot ID: <u>Wet A</u>

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Fraxinus pennsylvanica	T	FACW	9.		
2. Carex sp.	H	-	10.		
3. Fraxinus pennsylvanica	S	FACW	11.		
4. Aster sp.	H	-	12.		
5. Onoclea sensibilis	H	FACW	13.		
6. Toxicodendron radicans	H	FAC	14.		
7. Equisetum sp.	H	-	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-) 4 OF 4 = 100%

Remarks:

**HYDROLOGY**

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators:</b> <b>Primary Indicators:</b> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators:</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12" <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
<b>Field Observations:</b> Depth of Surface Water: <u>-</u> (in.) Depth to Free Water in Pit: <u>4.0</u> (in.) Depth to Saturated Soil: <u>1.0</u> (in.)	Remarks:

**SOILS**

Map Unit Name (Series and Phase): <u>Churchville Silt Loam 0-2%</u>		Drainage Class: <u>Somewhat poorly</u>			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type?    Yes    No			
<b>Profile Description:</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>0-7</u>	<u>A</u>	<u>10 YR 3/2</u>	<u>10YR 3/6</u>	<u>MMD</u>	<u>Silt Loam</u>
<u>7-12+</u>	<u>B</u>	<u>10 YR 5/2</u>	<u>10YR 5/8</u>	<u>MLP</u>	<u>Silt Loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
<b>Hydric Soil Indicators:</b>					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	<b>Yes</b>	No	
Wetland Hydrology Present?	<b>Yes</b>	No	(Circle)
Hydric Soils Present?	<b>Yes</b>	No	Is this Sampling Point Within a Wetland? <b>Yes</b> No
Remarks:			
<p>Wetland A is associated with NYSDEC mapped wetland RG-5          This wetland is also associated with Hotel Creek          Wetland A starts parallel to the active cell on the landfill, heads south and then east, ar          One farmland access was observed in the middle of Wetland A - a culvert provided for continued flow</p>			



**SOILS**

Map Unit Name (Series and Phase): <u>Churchville Silt Loam 0-2%</u>		Drainage Class: <u>Somewhat poorly</u>			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type?    Yes    No			
<b>Profile Description:</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>0-8</u>	<u>A</u>	<u>10 YR 4/2</u>			<u>Silt Loam</u>
<u>8-16+</u>	<u>B</u>	<u>10 YR 5/2</u>	<u>10YR 5/6</u>	<u>FFF</u>	<u>Silt Loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
<b>Hydric Soil Indicators:</b>					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					

**WETLAND DETERMINATION**

<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">Hydrophytic Vegetation Present?</td> <td style="width:10%;"><b>Yes</b></td> <td style="width:10%;"><b>No</b></td> <td></td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td><b>Yes</b></td> <td>No</td> <td></td> </tr> <tr> <td>Hydric Soils Present?</td> <td><b>Yes</b></td> <td>No</td> <td></td> </tr> </table>	Hydrophytic Vegetation Present?	<b>Yes</b>	<b>No</b>		Wetland Hydrology Present?	<b>Yes</b>	No		Hydric Soils Present?	<b>Yes</b>	No		<p>(Circle)</p> <p>Is this Sampling Point Within a Wetland?    Yes    <b>No</b></p>
Hydrophytic Vegetation Present?	<b>Yes</b>	<b>No</b>											
Wetland Hydrology Present?	<b>Yes</b>	No											
Hydric Soils Present?	<b>Yes</b>	No											
Remarks:													
<p>Upland plot for Wetland A Wetland A is associated with NYSDEC mapped wetland RG-5</p>													



**SOILS**

Map Unit Name (Series and Phase): <u>Lakemont silt loam, loamy subsoil variant - Lk</u>		Drainage Class: <u>Poorly</u>			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type?    Yes    No			
<b>Profile Description:</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>0-6</u>	<u>A</u>	<u>10 YR 2/1</u>	<u>-</u>	<u>-</u>	<u>Silt Loam</u>
<u>6-12+</u>	<u>B</u>	<u>10 YR 5/2</u>	<u>10YR 5/6</u>	<u>MMD</u>	<u>Sandy Clay Loam</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input checked="" type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	<b>Yes</b>	<b>No</b>	(Circle)  Is this Sampling Point Within a Wetland? <b>Yes</b> <b>No</b>
Wetland Hydrology Present?	<b>Yes</b>	<b>No</b>	
Hydric Soils Present?	<b>Yes</b>	<b>No</b>	
Remarks:			
Wetland B is located in the center of the inspected area and drains south via a drainage channel Wetland B is associated with NYSDEC mapped wetland RG-6 Wetland B receives flow from the sediment pond located immediately to the east of the wetland boundary			





**SOILS**

Map Unit Name (Series and Phase): <u>Churchville Silt Loam 0-2%</u>		Drainage Class: <u>Somewhat poorly</u>			
Taxonomy (Subgroup): _____		Field Observations Confirm Mapped Type?    Yes    No			
<b>Profile Description:</b>					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-11	A	10 YR 2/2	-	-	Sand Loam
8-16+	B	10 YR 5/2	-	-	Silt Loam
Hydric Soil Indicators:					
_____ Histosol		_____ Concretions			
_____ Histic Epipedon		_____ High Organic Content in Surface Layer Sandy Soils			
_____ Sulfidic Odor		_____ Organic Streaking in Sandy Soils			
_____ Aquic Moisture Regime		_____ Listed on Local Hydric Soils List			
_____ Reducing Conditions		_____ Listed on National Hydric Soils List			
_____ Gleyed or Low-Chroma Colors		_____ Other (Explain in Remarks)			
Remarks:					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	<b>Yes</b>	No	(Circle)  Is this Sampling Point Within a Wetland?    Yes    No
Wetland Hydrology Present?	<b>Yes</b>	No	
Hydric Soils Present?	<b>Yes</b>	No	
Remarks:			
Upland data point for Wetland B Wetland B is associated with NYSDEC mapped wetland RG-6			

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site Applicant/Owner Investigator	Mill Seat Landfill Waste Management of NY James Saxton	Date:	11/14/2008
		County:	Monroe
		State:	New York
Do Normal Circumstances exist on the site?		Yes	No
Is the site significantly disturbed (Atypical Situation)?		Yes	No
Is the area a potential Problem Area? (If needed, explain on reverse)		Yes	No
		Community ID:	WL
		Transect ID:	1
		Plot ID:	Wet D (2)

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Fraxinus pennsylvanica	Tree	FACW	9		
2 Acer saccharinum	Tree	FACW	10		
3 Acer rubrum	Tree	FAC	11		
4 Toxicodendron radicans	Vine	FAC	12		
5 Linderia benzoin	Shrub	FACW-	13		
6 Quercus bicolor	Tree	FACW+	14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW or FAC  
(excluding FAC -) 100%

Remarks:

**HYDROLOGY**

<p><input type="checkbox"/> Recorded Data (Describe in Remarks)</p> <p style="margin-left: 20px;"><input type="checkbox"/> Steam, Lake, or Tide Gauge</p> <p style="margin-left: 20px;"><input type="checkbox"/> Aerial Photographs</p> <p style="margin-left: 20px;"><input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <span style="float: right;">0 (in.)</span></p> <p>Depth of Free Water in Pit: <span style="float: right;">2 (in.)</span></p> <p>Depth to Saturated Soil: <span style="float: right;">0 (in.)</span></p>	<p>Wetland Hydrology Indicators</p> <p>Primary Indicators</p> <p><input type="checkbox"/> Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required)</p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches</p> <p><input checked="" type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
Remarks:	

**SOILS**

Map Unit Name		Drainage Class:	
(Series and Phase): <u>Lakemont</u>		Field Observations	
Taxonomy (subgroup): _____		Confirm mapped type?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Profile Description					
Depth (inches)	Horizon	Matrix Color (Munsell moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-5	A	10YR5/1	7.5YR5/6	common, fine distinct many, large	crumb, mucky silt loam
5+	B	10YR6/1	10YR6/8	prominent	msbk, heavy silt loam

Hydric Soil Indicators:

<input type="checkbox"/> Histosol	<input type="checkbox"/> Concretions
<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils
<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Organic Streaking in Sandy Soils
<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Listed on Local Hydric Soils List
<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Listed on National Hydric Soils List
<input checked="" type="checkbox"/> Gleyed or Low Chroma Colors	<input type="checkbox"/> Other (Explain in Remarks)

Remarks:

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Remarks:			

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site Applicant/Owner Investigator	Mill Seat Landfill Waste Management of NY James Saxton		Date: 11/14/2008 County: Monroe State: New York
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse)		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Community ID: WL Transect ID: 1 Plot ID: Upl D (2)

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Acer saccharum	Tree	FACU	9		
2 Prunus serotina	Tree	FACU	10		
3 Fraxinus pennsylvanica	Tree	FACW	11		
4 Lonicera tatarica	Shrub	FACU	12		
5 Rubus idaeus	Shrub	FAC-	13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW or FAC  
(excluding FAC -) 20%

Remarks:

**HYDROLOGY**

<p><input type="checkbox"/> Recorded Data (Describe in Remarks)</p> <p style="margin-left: 20px;"><input type="checkbox"/> Steam, Lake, or Tide Gauge</p> <p style="margin-left: 20px;"><input type="checkbox"/> Aerial Photographs</p> <p style="margin-left: 20px;"><input type="checkbox"/> Other</p> <p><input checked="" type="checkbox"/> No Recorded Data Available</p> <hr/> <p>Field Observations:</p> <p>Depth of Surface Water: <u>0</u> (in.)</p> <p>Depth of Free Water in Pit: <u>&gt;16</u> (in.)</p> <p>Depth to Saturated Soil: <u>&gt;16</u> (in.)</p>	<p><b>Wetland Hydrology Indicators</b></p> <p><b>Primary Indicators</b></p> <p><input type="checkbox"/> Inundated</p> <p><input type="checkbox"/> Saturated in Upper 12 Inches</p> <p><input type="checkbox"/> Water Marks</p> <p><input type="checkbox"/> Drift Lines</p> <p><input type="checkbox"/> Sediment Deposits</p> <p><input type="checkbox"/> Drainage Patterns in Wetlands</p> <p><b>Secondary Indicators (2 or more required)</b></p> <p><input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches</p> <p><input type="checkbox"/> Water-Stained Leaves</p> <p><input type="checkbox"/> Local Soil Survey Data</p> <p><input type="checkbox"/> FAC-Neutral Test</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
Remarks: Areas slopes up from wetland area.	

**SOILS**

Map Unit Name		(Series and Phase): <u>Lakemont</u>		Drainage Class: <u>somewhat poorly</u>	
Taxonomy (subgroup): <u>Udollic endoaqualfs</u>		Field Observations		Confirm mapped type? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
<b>Profile Description</b>					
Depth (inches)	Horizon	Matrix Color (Munsell moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-4	A	10YR5/2	None	few fine	crumb, silt loam
4+	B	10YR4/4	10YR5/6	faint	msbk, silt loam
<b>Hydric Soil Indicators:</b>					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	Yes	<input type="checkbox"/> No	Is this Sampling Point Within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes	<input type="checkbox"/> No	
Hydric Soils Present?	Yes	<input type="checkbox"/> No	
Remarks:			

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site Applicant/Owner Investigator	<u>Mill Seat Landfill</u> <u>Waste Management of NY</u> <u>James Saxton</u>	Date:	<u>11/14/2008</u>
		County:	<u>Monroe</u>
		State:	<u>New York</u>
Do Normal Circumstances exist on the site?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Community ID:	<u>JB</u>
Is the site significantly disturbed (Atypical Situation)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID:	<u>1</u>
Is the area a potential Problem Area? (If needed, explain on reverse)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Plot ID:	<u>Wet C</u>

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Fraxinus pennsylvanica</u>	<u>Tree</u>	<u>FACW</u>	9 _____	_____	_____
2 <u>Cornus stolonifera</u>	<u>Shrub</u>	<u>FACW+</u>	10 _____	_____	_____
3 <u>Cornus racemosa</u>	<u>Shrub</u>	<u>FAC</u>	11 _____	_____	_____
4 <u>Aster spp.</u>	<u>Herb</u>	<u>FAC-OBL</u>	12 _____	_____	_____
5 <u>Vitis riparia</u>	<u>Vine</u>	<u>FACW</u>	13 _____	_____	_____
6 <u>Eupatoriadelphus maculatus</u>	<u>Herb</u>	<u>FACW</u>	14 _____	_____	_____
7 <u>Toxicodendron radicans</u>	<u>Vine</u>	<u>FAC</u>	15 _____	_____	_____
8 _____	_____	_____	16 _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC  
(excluding FAC -) 100%

Remarks:

**HYDROLOGY**

Recorded Data (Describe in Remarks) <input type="checkbox"/> Steam, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators</b> <b>Primary Indicators</b> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required)</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations:  Depth of Surface Water: <u>0</u> (in.)  Depth of Free Water in Pit: <u>8</u> (in.)  Depth to Saturated Soil: <u>8</u> (in.)	
Remarks:	

**SOILS**

Map Unit Name		(Series and Phase): <u>Lima silt loam, 0-3 and 3-8 % slopes</u>		Drainage Class: <u>moderately well</u>	
Taxonomy (subgroup): <u>Oxyaquic hapludalfs</u>		Field Observations Confirm mapped type? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
<b>Profile Description</b>					
Depth (inches)	Horizon	Matrix Color (Munsell moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-8	Ap	10YR4/2	none		blocky, silt loam
8+	B	10TR 5/2	10TR5/6	common fine prominent	msbk, sil loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Hydric Soils Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Mill Seat Landfill</u> Applicant/Owner: <u>Waste Management of NY</u> Investigator: <u>James Saxton</u>	Date: <u>11/14/2008</u> County: <u>Monroe</u> State: <u>New York</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical Situation)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the area a potential Problem Area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (if needed, explain on reverse)	Community ID: <u>JB</u> Transect ID: <u>1</u> Plot ID: <u>Upl C</u>

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Fraxinus pennsylvanica	Tree	FACW	9		
2 Lonicera tatarica	Shrub	FACU	10		
3 Cornus stolonifera	Shrub	FACW+	11		
4			12		
5			13		
6			14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC -) 67%

Remarks:

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Steam, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators</b> <b>Primary Indicators</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required)</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>0</u> (in.) Depth of Free Water in Pit: <u>&gt;16</u> (in.) Depth to Saturated Soil: <u>14</u> (in.)	
Remarks:	





**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site <u>Mill Seat Landfill</u> Applicant/Owner <u>Waste Management of NY</u> Investigator <u>James Saxton</u>	Date: <u>11/14/2008</u> County: <u>Monroe</u> State: <u>New York</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical Situation)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the area a potential Problem Area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If needed, explain on reverse)	Community ID: <u>J</u> Transect ID: <u>1</u> Plot ID: <u>Wet D</u>

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 Populus deltoides	Tree	FAC	9		
2 Cornus stolonifera	Shrub	FACW+	10		
3 Phalaris arundinacea	Herb	FACW+	11		
4 Leersia oryzoides	Herb	OBL	12		
5 Onoclea sensibilis	Herb	FACW	13		
6 Juncus effusus	Herb	FACW+	14		
7			15		
8			16		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC -) 100%

Remarks:

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> Steam, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators</b> <b>Primary Indicators</b> <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required)</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input checked="" type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>0</u> (in.) Depth of Free Water in Pit: <u>2</u> (in.) Depth to Saturated Soil: <u>0</u> (in.)	
Remarks: <u>Areas slopes up from wetland area.</u>	

**SOILS**

Map Unit Name		(Series and Phase): <u>Lakemont</u>		Drainage Class:	<u>somewhat poorly</u>
Taxonomy (subgroup):		<u>Udolic endoaqualfs</u>		Field Observations	
				Confirm mapped type?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<b>Profile Description</b>					
Depth (inches)	Horizon	Matrix Color (Munsell moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>0-4</u>	<u>A</u>	<u>10YR5/1</u>	<u>7.5YR5/8</u>	<u>many, fine distinct many medium</u>	<u>crumb, mucky silt loam</u>
<u>4+</u>	<u>B</u>	<u>10YR6/1</u>	<u>10YR6/8</u>	<u>prominent</u>	<u>msbk, heavy silt loam</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Remarks:			

**DATA FORM**  
**ROUTINE WETLAND DETERMINATION**  
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Mill Seat Landfill</u> Applicant/Owner: <u>Waste Management of NY</u> Investigator: <u>James Saxton</u>	Date: <u>11/14/2008</u> County: <u>Monroe</u> State: <u>New York</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain on reverse)	Community ID: <u>J</u> Transect ID: <u>1</u> Plot ID: <u>Upl D</u>

**VEGETATION**

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1 <u>Dipsacus sylvestris</u>	<u>Herb</u>	<u>NI</u>	9 _____	_____	_____
2 <u>Solidago canadensis</u>	<u>Herb</u>	<u>FACU</u>	10 _____	_____	_____
3 <u>Phalaris arundinacea</u>	<u>Herb</u>	<u>FACW+</u>	11 _____	_____	_____
4 <u>Lonicera tatarica</u>	<u>Shrub</u>	<u>FACU</u>	12 _____	_____	_____
5 _____	_____	_____	13 _____	_____	_____
6 _____	_____	_____	14 _____	_____	_____
7 _____	_____	_____	15 _____	_____	_____
8 _____	_____	_____	16 _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC -) 33%

Remarks:

**HYDROLOGY**

<input type="checkbox"/> Recorded Data (Describe in Remarks) <input type="checkbox"/> _____ Steam, Lake, or Tide Gauge <input type="checkbox"/> _____ Aerial Photographs <input type="checkbox"/> _____ Other <input checked="" type="checkbox"/> No Recorded Data Available	<b>Wetland Hydrology Indicators</b> <b>Primary Indicators</b> <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands <b>Secondary Indicators (2 or more required)</b> <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>0</u> (in.) Depth of Free Water in Pit: <u>&gt;16</u> (in.) Depth to Saturated Soil: <u>&gt;16</u> (in.)	
Remarks: <u>Areas slopes up from wetland area.</u>	

**SOILS**

Map Unit Name		(Series and Phase): <u>Lakemont</u>		Drainage Class: <u>somewhat poorly</u>	
Taxonomy (subgroup): <u>Udolic endoaqualfs</u>		Field Observations		Confirm mapped type? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>Profile Description</b>					
Depth (inches)	Horizon	Matrix Color (Munsell moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-5		10YR5/2	None	few fine	crumb, silt loam
5-9	A	10YR4/2	10YR5/6	faint	wsbk, silt loam
9+	B	10YR4/3	10YR6/6	common, fine faint	msbk, heavy silt loam
<b>Hydric Soil Indicators:</b>					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Area appears to have received fill many years ago. Soils exhibited a thin (5-8 inch thick) veneer of mixed soil fill.					

**WETLAND DETERMINATION**

Hydrophytic Vegetation Present?	Yes	<input checked="" type="checkbox"/> No	Is this Sampling Point Within a Wetland? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes	<input checked="" type="checkbox"/> No	
Hydric Soils Present?	Yes	<input checked="" type="checkbox"/> No	
Remarks: Area appears to have received fill many years ago. Soils exhibited a thin (5-8 inch thick) veneer of mixed soil fill. This situation has no effect on the wetland determination for this location.			

**Appendix B**  
**Site Photographs**

**Mill Seat Landfill - Proposed Soil Borrow Areas  
Wetland Delineation Site Photographs - Wetland A**



Photo 1: View of a shrubby section of Wetland A, adjacent to Hotel Creek. Facing south.

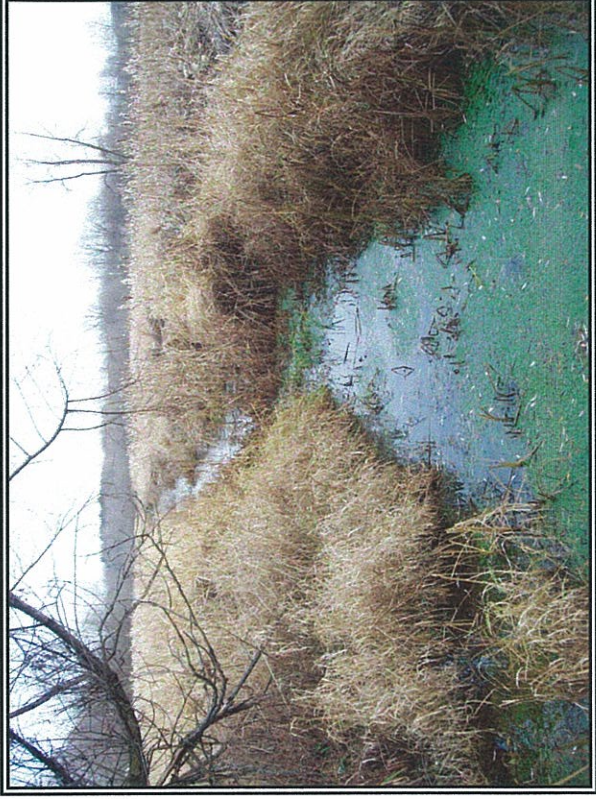


Photo 2: Facing east, looking at Hotel Creek/Wetland A from the field access culvert.

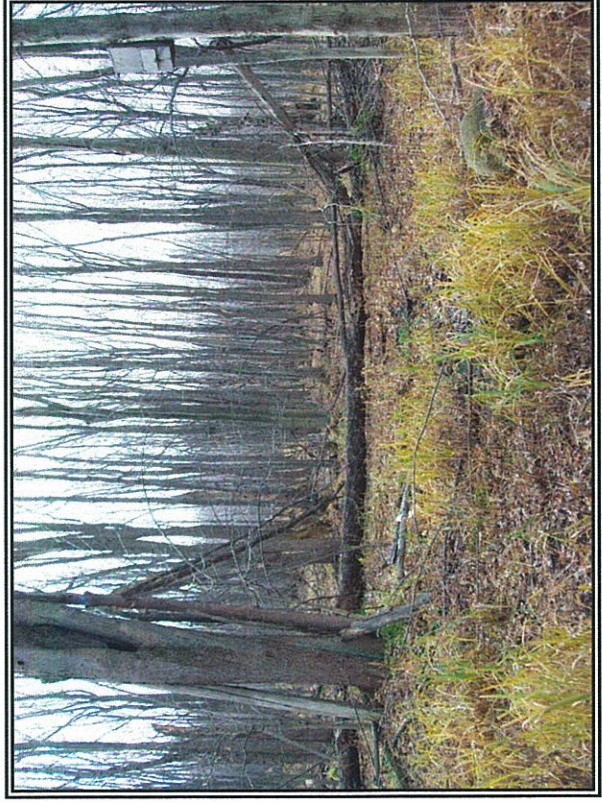


Photo 3: Forested portion of wetland A, located along the western portion of the field delineated area.



Photo 4: View of inundated forested portion of Wetland A. Facing northwest toward middle of Wetland A.

**Mill Seat Landfill - Proposed Soil Borrow Areas  
Wetland Delineation Site Photographs - Wetland B**



Photo 5: Looking into the middle of Wetland B. The majority of Wetland B is a similar cover type.



Photo 6: Facing south, this shows the outlet culvert of Wetland B. The drainage of Wetland B starts here.



Photo 7: View, facing south, of the wetland drainage that outlets water from Wetland B.

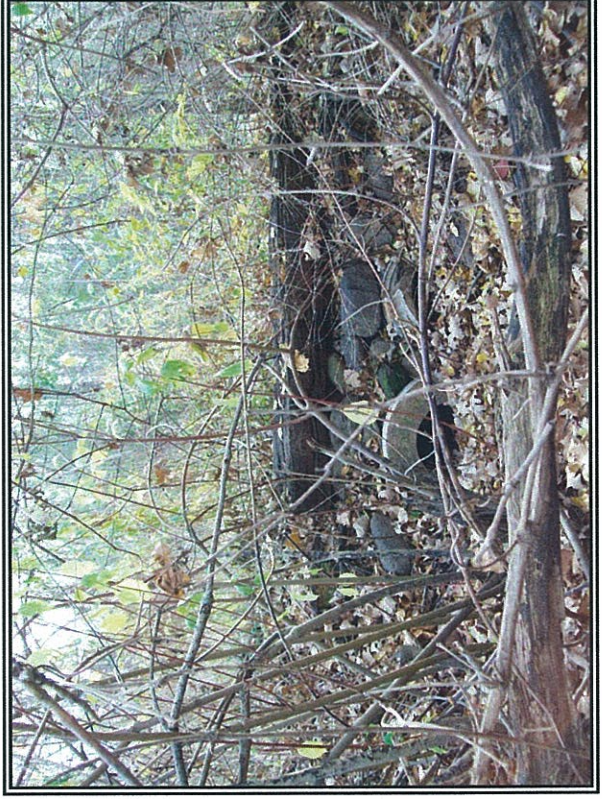


Photo 8: This view shows the pair of ceramic culverts located at the southern end of Wetland B's drainage.



**Mill Seat Landfill - Proposed Soil Borrow Areas**  
**Wetland Delineation Site Photographs - Wetland C**



Photo 9: Shows the shrubby cover type that dominates Wetland C.

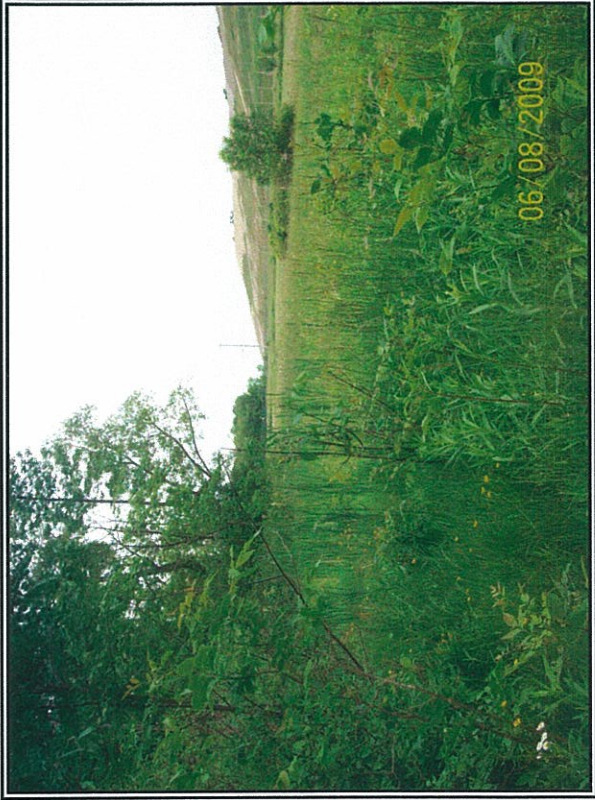


Photo 10: Facing west, the wet meadow area of Wetland C is shown in the mid-ground.

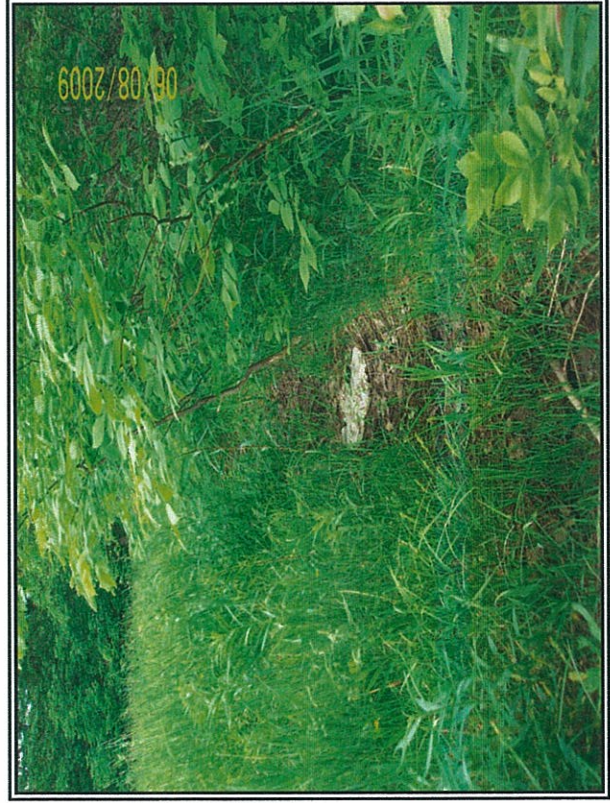


Photo 11: Shallow ditch that runs alongside Wetland C, but does not empty into another wetland or water. This ditch disappears at the treeline, which can be seen in the background. Facing southeast.

**Mill Seat Landfill - Proposed Soil Borrow Areas**  
**Wetland Delineation Site Photographs - Wetland D**



Photo 12: Representative view of Wetland D. This photo shows the thick understory observed within Wetland D. This picture shows Wetland D south of O'Brien Road.



Photo 13: Facing northwest, the vegetative cover types of Wetland D are shown. This picture shows Wetland D south of O'Brien Road.

**Mahar Property at the Mill Seat Landfill Facility  
Waste Management of New York, LLC**

**Town of Riga  
Monroe County, New York**

## **Wetland Delineation Report**

**December 2011**

Mahar Property at the Mill Seat Landfill Facility  
Waste Management of New York, LLC

Town of Riga  
Monroe County, New York

Wetland Delineation Report

December 2011

Prepared For:

Waste Management of New York, LLC  
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Bergen, New York 14416

Prepared By:

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## Table of Contents

<u>Section</u>	<u>Page</u>
1.0 Introduction.....	1
2.0 Site Description .....	2
2.1 Location .....	2
2.2 Site Use .....	2
2.3 Surface Water.....	3
3.0 Agency Resource Information .....	4
3.1 Topographic Mapping .....	4
3.2 Soils Information .....	5
3.3 New York State Department of Environmental Conservation Freshwater Wetlands Mapping .....	6
3.4 National Wetlands Inventory Mapping .....	7
3.5 Results of Background Information Review .....	7
4.0 Site Ecology.....	8
4.1 General Cover Types.....	8
4.2 Habitat Types.....	8
4.3 Wetland Cover Types .....	9
5.0 Wetland Delineation Methodology .....	11
5.1 Vegetation.....	12
5.2 Hydrology.....	13
5.3 Soils.....	14
5.4 Mapping.....	15
6.0 Results .....	16
6.1 Wetland Labeling .....	16
6.2 Delineated Wetlands.....	16
7.0 Summary and Conclusions.....	19
8.0 Bibliography.....	20

**Table of Contents – Continued**

Tables

Table 1 – Soil Survey Information ..... 5  
Table 2 – Characteristics of the Great Lakes Plain and Erie-Ontario Plain  
Ecological Zones..... 8  
Table 3 – Wetland Data Plot Information and Wetland Jurisdictional Criteria ..... 17

Figures

- Figure 1: Site Location Map
- Figure 2: Topographic Location Maps
- Figure 3: Soils Mapping
- Figure 4: Mapped Wetland and Water Resources
- Figure 5: Delineated Wetland Resources
- Figure 6: Data Plot Locations
- Figure 7: Photograph Locations

Appendices

- Appendix A – Wetland Field Delineation Datasheets
- Appendix B – Site Photographs

## 1.0 Introduction

This report describes the wetland resources located on the approximately 207 acre Mahar Property. The Mahar Property was recently acquired by Waste Management of New York, LLC (WMNY), the operator of the adjacent Mill Seat Landfill Facility. The 385-acre Mill Seat Landfill is located in the Town of Riga, Monroe County, New York (site location map, Figure 1), and is currently owned by Monroe County. The Mahar Property is located south of the current landfill, along the south side of Bovee Road.

A wetland delineation was completed by Barton & Loguidice, P.C. (B&L) on October 4 and 7, 2011, to map the existing freshwater wetland and water resources on the Mahar Property. The locations and sizes of these regulated areas are important to consider during future site planning. The wetlands located on the Mahar Property were delineated using the Routine Delineation Method set forth in the 1987 *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (USACE, 2009). These methods were used to identify wetlands located on the Mahar Property that are subject to federal jurisdiction by the U.S. Army Corps of Engineers (USACE).

This report contains a description of the Mahar Property including the site ecology, the methods used to determine the wetland boundaries, agency resource information obtained for the site, and the results of the wetland field delineation. Wetland delineation field data sheets and photographs of the wetland resources located on the Mahar Property are found in Appendices A and B at the end of this report.

## **2.0 Site Description**

### **2.1 Location**

The Town of Riga is located in the southwest corner of Monroe County, along the County boundary between Monroe and Genesee Counties, and adjacent to the Town of Bergen. The Mill Seat Landfill is located off State Route 33A (Chili Avenue), bisecting Brew Road into two sections: a north section and a south section. The west side of the Mill Seat Landfill property abuts the right-of-way boundary for Interstate 490. The approximately 207 acre Mahar Property borders the south side of Bovee Road, located south of the landfill facility.

### **2.2 Site Use**

Aside from the landfill facility, land use surrounding the Mahar Property is predominantly agricultural. WMNY leases sections of its property to individuals for crop production and haying. Many of these leased agricultural lands are located north of Bovee Road and west of Brew Road (Figure 1). Within the general area, residential properties are mainly scattered along the north side of Bovee Road, though there are two (2) residential parcels that form outparcels along the north side of the Mahar Property. During the wetland field delineation, numerous active agricultural fields, planted with corn or alfalfa, were observed within the Mahar Property limits. Areas that were not observed to be in agricultural production during the site visit were associated with wetland areas or areas of steep topography, as evident in Figure 2. The lands located within the Mahar Property are included in agricultural district MONR002, created in 1974.



### 2.3 Surface Water

The Mahar Property and surrounding lands are located within the Upper Genesee Drainage Basin, recognized under Title 6, Chapter 10, Article B, Part 821 in the New York Codes, Rules, and Regulations (NYCRR). One (1) stream is mapped by the New York State Department of Environmental Conservation (NYSDEC) near (within 1,500 feet) the Mahar Property. Hotel Creek, designated by NYSDEC as waterway Ont. 117-19-9, flows eastward just north of Bovee Road and crosses Brew Road approximately 900 feet north of the Mahar Property. Hotel Creek is a tributary of Black Creek, which is the nineteenth tributary to the Genesee River. Hotel Creek originates as hillside runoff in the Town of Bergen in Genesee County and then flows east across the county boundary between Monroe and Genesee, south of the Mill Seat Landfill and north of the Mahar Property. Eventually, Hotel Creek discharges into Black Creek within the Town of Riga, just north of Robertson Road.

Hotel Creek was observed in the field during a previous wetland delineation of WMNY and Monroe County properties located south of the landfill facility and north of Bovee Road. Wetlands adjacent to Hotel Creek were mapped in the field during this delineation effort (B&L, 2009).

### **3.0 Agency Resource Information**

Prior to undertaking the field wetland delineation, a desktop information search was completed to review the mapped soils, mapped wetlands, and site topography associated with the property. This information review included the USA topographic mapping service, soils information from the Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database, National Wetland Inventory (NWI) mapping (Churchville area coverage), and NYSDEC freshwater wetland mapping (Monroe County coverage).

#### **3.1 Topographic Mapping**

Topographic mapping for the Mahar Property is illustrated by Figure 2. Three (3) drumlins intersect the Mahar property: Science Hill along the north-central boundary, Blue Hill along the east property boundary, and Pinnacle Hill along the southeast/south-central portion of the property. Two (2) low-lying and presumably wetland areas are also shown at the southeast and southwest corners of the property. The central portion of the property is gently sloping towards the southeast and southwest. The USA topographic mapping service, provided by ESRI through ArcGIS Online, provides scanned images of United States Geological Survey (USGS) topographic maps. The Mahar Property is included on the USGS' 7.5 minute Churchville quadrangle. The highest point on the Mahar Property is located along the south edge of the property at the top of Pinnacle Hill, an elevation of 760 feet above mean sea level. The lowest topographic point on the Property is located near the northeast corner of the property, at an elevation of 650 feet above mean sea level.

### 3.2 Soils Information

The NRCS SSURGO Database was reviewed to determine the types of soils mapped within the limits of the field delineated area. Figure 3 displays the soil symbols, series, and phases of these mapped soil types. Table 1 lists the mapping unit and drainage classification information that corresponds to each soil symbol mapped within the Mahar Property.

<b>Table 1 Soil Survey Information</b>			
<b>Soil Symbol</b>	<b>Mapping Unit</b>	<b>Drainage Classification</b>	<b>Acreage Within Project Limits</b>
<i>ApA</i>	<i>Appleton loam, 0-3% slopes</i>	<i>Somewhat poorly</i>	<i>0.04</i>
BcB	Benson channery loam, 0-8% slopes	Somewhat excessively	0.39
<i>BrA</i>	<i>Brockport silty clay loam, 0-2% slopes</i>	<i>Somewhat poorly</i>	<i>16.38</i>
<b>Ca (Cd)</b>	<b>Canandaigua silt loam</b>	<b>Very poorly</b>	<b>25.95</b>
<i>ChA</i>	<i>Churchville silt loam, 0-2% slopes</i>	<i>Somewhat poorly</i>	<i>16.91</i>
<b>Ed</b>	<b>Edwards muck</b>	<b>Very poorly</b>	<b>3.91</b>
Fw	Freshwater marsh	--	4.10
HIA	Hilton loam, 0-3% slopes	Moderately well	2.02
HIB	Hilton loam, 3-8% slopes	Moderately well	7.81
HnB	Honeoye silt loam, 3-8% slopes	Well	20.79
HoB	Honeoye silt loam, limestone substratum, 3-8% slopes	Moderately well	3.48
LnA	Lima silt loam, 0-3% slopes	Moderately well	4.69
LnB	Lima silt loam, 3-8% slopes	Moderately well	6.29
LoB	Lima and Cazenovia silt loams, limestone substratum, 0-6% slopes	Moderately well	19.49
OfB	Ontario fine sandy loam, 3-8% slopes	Well	0.52
OfC	Ontario fine sandy loam, 8-15% slopes	Well	0.85

<b>Table 1 Soil Survey Information</b>			
<b>Soil Symbol</b>	<b>Mapping Unit</b>	<b>Drainage Classification</b>	<b>Acreage Within Project Limits</b>
OnB	Ontario loam, 15-25% slopes, eroded	Well	6.54
OnC	Ontario loam, 3-8% slopes	Well	10.79
OnD3	Ontario loam, 8-15% slopes	Well	9.57
OnF	Ontario loam, 25-60% slopes	Well	4.29
Pu	Pits and quarries	--	8.03
RgB	Riga silt loam, 2-8% slopes	Moderately well	15.60
<b>St</b>	<b>Sun loam, moderately shallow variant</b>	<b>Poorly</b>	<b>5.84</b>
WcB	Wampsville cobbly loam, 3-8% slopes	Well	9.70
WcC	Wampsville cobbly loam, 8-15% slopes	Well	3.21

**Local Hydric Soil Unit (NYS) – Bold**

*Hydric Inclusions - Italicized*

The hydric soil units and areas of hydric inclusions that are mapped within the Mahar Property correspond well with the areas of inundation and other wetland characteristics that were observed during the field delineation.

### 3.3 New York State Department of Environmental Conservation Freshwater Wetlands Mapping

Figure 4 shows that NYSDEC regulated wetland RG-33 is the sole state mapped wetland located on the Mahar Property. As Figure 4 illustrates, RG-33 is located within a forested area in the southeast corner of the Mahar Property, located between Blue Hill and Pinnacle Hill. RG-33 is recognized as a Class 3 wetland and reported by the NYSDEC as being 100.5 acres in size. Additional NYSDEC mapped wetlands are located north of Bovee Road on lands owned by WMNY. A delineation of those wetlands was completed in 2009.

### 3.4 National Wetland Inventory Mapping

Figure 4 also depicts the National Wetlands Inventory wetlands mapped within and adjacent to the Mahar Property. There are two (2) NWI wetland polygons mapped on the Property. These mapped polygons represent the following wetland types: palustrine emergent and palustrine forested/scrub-shrub. The locations of these mapped wetlands concur with the mapped location of NYSDEC freshwater wetland RG-33 (discussed in section 3.3) and the freshwater wetlands delineated in the field (discussed in section 6). Additional NWI wetland polygons are mapped north of Bovee Road on lands owned by WMNY. Those wetlands were previously delineated in 2008 and 2009.

### 3.5 Results of Background Information Review

A preliminary review of background information conducted prior to the wetland field investigation indicated a high likelihood for potential federally-regulated wetlands to be located on the Mahar Property. This determination was based on the identification of mapped NYSDEC and NWI wetlands and the presence of hydric soils mapped at various locations within the Property. A field-based wetland delineation was conducted to confirm these preliminary findings and identify the limits of all existing wetland locations.

## 4.0 Site Ecology

### 4.1 General Cover Types

Most of the Mahar Property is currently associated with agricultural practices. Most of the cover types observed within the project limits were croplands (corn) or hay fields (alfalfa) bordered by hedgerows. The southeast and southwest corners of the property and a portion of the property center are not actively farmed and are instead dominated by deciduous forest and shrubland. A single residence is located within the Mahar Property; two other residences are located on adjacent parcels.

### 4.2 Habitat Types

The distribution of plant and animal species corresponds with the different ecoregions mapped within the project area. The project is located within the Great Lakes Plain (Zone B), Erie-Ontario Plain Ecological Zone of New York State (NYSDEC, 2008). Characteristics of this zone are provided in Table 2.

<b>Table 2 – Characteristics of the Great Lakes Plain and Erie-Ontario Plain Ecological Zones</b>	
Topography	This zone is similar to a plateau with horizontal rock formations – basically a flat plain with minimal rise above adjacent land
Elevation	The majority of this ecological zone is under 800 feet in elevation
Soils	Generally limy and situated on glacial till over undulating to rolling terrain – soils tend to be medium to fine textured
Vegetation	This zone is located in the elm-red maple northern hardwood natural vegetation zone. Only about 1/5 of the land is forested (the average Town in this Zone is 15% wooded)
Land Use	Manufacturing is the primary source of income with agriculture as a secondary source. Vegetable, grain, and fruit farms are the major agricultural activities.

<b>Table 2 – Characteristics of the Great Lakes Plain and Erie-Ontario Plain Ecological Zones</b>	
Mean July Temperature	70 – 75 degrees Fahrenheit
Mean January Temperature	20 – 25 degrees Fahrenheit
Mean Annual Snowfall	60 – 80 inches
Growing Season	160 – 180 days in length

#### 4.3 Wetland Cover Types

General wetland cover types identified within the field delineated area include emergent, scrub-shrub, and forested. A brief description of each of these wetland cover types is presented below:

**Emergent:** Erect, rooted, herbaceous hydrophytic plants characterize emergent wetlands. This vegetation can be observed throughout most of the growing season. These wetlands typically have standing water above the soil surface for a portion of the year and often include fringe communities on open water edges.

**Scrub-Shrub:** This wetland cover type is primarily found in areas that were formerly open or otherwise cleared. Scrub-shrub wetlands are often found in areas of shallow standing water. Woody vegetation that is less than 20 feet in height define these wetlands. Within the project area, scrub-shrub wetlands were observed bordering emergent wetlands or noted as localized pockets within larger forested wetland areas.

**Forested:** Forested wetlands are dominated by woody vegetation taller than 20 feet, where soil is at least periodically saturated or inundated. Forested wetlands within the delineated wetland area commonly included deciduous trees with an understory of hydrophytic herbaceous vegetation. The density of the understory was observed to vary by location.

## **5.0 Wetland Delineation Methodology**

The background data described in Section 3.0 was reviewed prior to undertaking the wetland field investigation. The Routine Wetlands Determination Method with Onsite Inspection (Environmental Laboratory, 1987) and Northeast/Northcentral Regional Supplement to the 1987 Corps of Engineers' Manual were used to identify wetlands located within the project area that are subject to jurisdiction by the U.S. Army Corps of Engineers (USACE).

B&L performed data collection and delineation of the wetland boundaries on October 4 and 7, 2011. Observations of vegetative communities, soils, and hydrological characteristics were documented and used to determine the extent of wetland boundaries in the field.

The boundaries of all delineated wetlands are collectively mapped on Figure 5. All of the data collected in the field were recorded on field data sheets (located in Appendix A). The upland and wetland data plot locations associated with each delineated wetland are pictured on Figure 6.

The first step of the wetland field delineation was to determine whether normal conditions were present at each identified wetland location. Each site was then examined for evidence of natural or human induced alteration of vegetation, soils, or hydrology. These investigations were followed by analyzing the surrounding area and determining the location of the wetland/upland interface. Selected points were sampled for vegetation, hydrology, and soils to help determine the location of this boundary.



## 5.1 Vegetation

The presence of wetland vegetation was determined by evaluating the indicator statuses of dominant plant species in each vegetative stratum (i.e., herbaceous layer, shrub/sapling layer, tree layer, and woody vine layer). Dominant plant species were determined using percent aerial coverage estimates. The plant species that immediately exceeded 50% of the total dominance measure for a given stratum (when ranked in descending order of abundance and cumulatively totaled), plus any additional species comprising 20% or more of the total dominance measure for that stratum, were considered to be the dominant vegetative species for the data plot.

The wetland indicator statuses (obligate - OBL, facultative wetland - FACW, facultative - FAC, facultative upland - FACU, or upland - UPL) for all dominant plant species identified in the sample plots were determined from the *National List of Plant Species That Occur in Wetlands: 1988 National Summary* (U.S. Fish and Wildlife Service, 1988).

The USACE's Regional Supplement uses a sequence of four tests to establish the presence or absence of a dominance of hydrophytic vegetation. The four tests are done in a sequence on an if/then logic test basis. Proceeding to the next indicator level should only be completed if the preceding indicator did not determine a dominance of hydrophytic vegetation at the sampling location. Indicator 1 is the rapid test for hydrophytic vegetation. This indicator is applied if all dominant species across all vegetation strata are rated OBL or FACW. Indicator 2 is the dominance test. Vegetation is considered to be hydrophytic if more than 50% of the dominant plant species across all strata are rated OBL, FACW, or FAC. The dominance test uses the 50/20 rule to determine the dominant species within a vegetative plot.

The third indicator of hydrophytic vegetation is linked to the prevalence index. This prevalence index ranges from 1 to 5. In order for a sample area to contain hydrophytic vegetation the plot must have a prevalence index of 3 or less. The prevalence index is a weighted-average of wetland indicator statuses of all plant species in the sampling plot. The wetland indicator status of each species is assigned a value according to the following scale: OBL-1, FACW-2, FAC-3, FACU-4, and UPL-5. These assigned values are multiplied by the absolute percent cover of all species with that particular indicator status. The product of each indicator value is then summed and divided by the total percent cover, resulting in the prevalence index for that vegetation plot. The equation is as follows:

$$\text{Prevalence Index} = \frac{A_{obl} + 2 * A_{facw} + 3 * A_{fac} + 4 * A_{facu} + 5 * A_{upl}}{A_{obl} + A_{facw} + A_{fac} + A_{facu} + A_{upl}}$$

where A(x) is the absolute percent cover

Indicator four consists of morphological adaptations. Certain plant species exhibit morphological changes in order to survive in areas that are saturated or flooded for prolonged periods of time. Some common vegetative morphological adaptations in the northeast consist of adventitious roots, hypertrophied lenticels, multi-stemmed trunks, and shallow root systems.

Plant community data recorded from each sample plot are included on the wetland delineation field data sheets found in Appendix A.

## 5.2 Hydrology

The presence of primary hydrologic indicators (such as surface (indicator A1), saturation (indicator A3), or a high water table (indicator A2)) or secondary hydrologic indicators (such as drainage patterns (indicator B10), geomorphic position (indicator D2), or FAC-neutral test (indicator D5)) was determined through visual observations at the data plot locations and surrounding areas. Soil saturation was determined by sampling the soils at each plot to a minimal depth of 10-inches, if possible. These soil test holes were observed in order to record the depth to which water rose in the hole. Hydrologic data gathered in the field at each sample plot is included on the wetland delineation field data sheets found in Appendix A.

## 5.3 Soils

The presence of hydric soil indicators was determined by extruding soil samples with a soil auger up to a minimal depth of 10-inches, if possible. A Munsell Soil Color Chart (2009 Edition) was used to determine soil color for all encountered horizons within the soil profile, including different layers within the same horizon, if encountered. Soil profiles were compared to hydric soil indicators for the USDA Subregion Land Resource Region (LRR) R – Northeastern Forests, included within the Northcentral and Northeast Regional Supplement (USACE, 2009). Soil color information and other observations made at each sample plot are included on the wetland delineation field data sheets found in Appendix A.

A wetland determination was made at each sample plot after characterizing the vegetation, hydrologic indicators, and soil characteristics. If the hydrophytic vegetation, hydrology, and hydric soil criteria were met, the area

was determined to be a wetland. If the criterion for one or more of the three-wetland indicators was not met, the area was determined to not be a wetland.

#### 5.4 Mapping

The boundaries of each wetland location were surveyed in the field using a handheld Global Positioning System (GPS). Two hand-held Trimble GeoXH models with sub-foot and decimeter accuracy, respectively, were used to gather each point location and map each wetland boundary on the Mahar Property. The wetland boundaries were later added to the Geographic Information System (GIS) base mapping for the site. Representative photographs taken at wetland locations throughout the Property are included in Appendix B.

## **6.0 Results**

### **6.1 Wetland Labeling**

As part of this wetland delineation field effort, a total of five (5) wetland areas were identified and delineated within the limits of the Mahar property (see wetland delineation map Figure 5).

Identified wetland areas were individually labeled alphabetically from A to E. Vegetative, soil, and hydrologic characteristics of each delineated wetland can be viewed on the corresponding field data sheets located in Appendix A. No mapped or unmapped streams or other Waters of the U.S., aside from the wetland locations, were observed on the Property.

### **6.2 Delineated Wetlands**

Delineated wetlands A, B, C, and E were determined in the field to be ‘isolated’ wetlands, meaning that these areas are not hydrologically, biologically, or chemically connected to a Traditionally Navigable Water (TNW), as defined by the USACE. Wetlands B, C, and E represented wooded depressional areas in the landscape that were seasonally inundated. These areas were surrounded by upland forest; the slight rise in topography from the wetland to the surrounding areas is evident in the site photographs provided in Appendix B. Figure 7 is a reference guide for the site photographs; the locations and view points for each photograph are included on this figure.

Wetland A was located at a low spot along Bovee Road. Stormwater runoff from the roadway collected in this area; however, no culverts were observed at this location that hydrologically connected Wetland A with any

wetlands or waters north of Bovee Road. Because hydrological, chemical or biological connections between Wetlands A, B, C, or E to any TNWs could not be established in the field, it is likely that these areas are not under federal jurisdiction by the U.S. Army Corps of Engineers. A Jurisdictional Determination, which would include field verification by agency personnel, would need to be requested from the USACE to confirm this determination.

Wetland D, which represented NYSDEC mapped wetland RG-33, drains southeast from the Mahar property and then east where it flows into a NYSDEC mapped stream, Ont. 117-19-4-P11-1-2-a. Wetland D represents the headwater wetlands of tributary a of tributary 2 to Mill Creek (also known as Blue Pond Inlet). Wetland D is a state and federally regulated wetland and would require authorization from the USACE for discharges within it, or a permit from USACE and NYSDEC if development activities were proposed in or within 100 feet of it.

Wetland and upland data plots were performed and recorded for each delineated wetland. The locations of these data plots are included on Figure 6. Information regarding soil characteristics, hydrology, and vegetation at each data plot can be viewed on the field data sheets located in Appendix A. Figure 5 shows the delineated boundaries of all five (5) wetlands located during the field investigation. The characteristics of these wetlands are further detailed in Table 3. Data recorded at each wetland plot location is displayed in this Table to provide a summary of the characteristics of each delineated wetland.

**Table 3 – Wetland Data Plot Information and Wetland Jurisdictional Criteria**

Resource ID	Plot ID	Cover Type(s)	Dominant Vegetation	Vegetative Indicator(s) <sup>1</sup>	Hydrologic Indicator(s) <sup>2</sup>	Soil Indicators(s) <sup>3</sup>
Wetland A	Plot 1	Scrub-shrub	Narrow-leaved cattail, pussy willow, riverbank grape	Rapid test	A2, A3, D2	F3
Wetland B	Plot 1	Forested	Poison ivy, silver maple, green ash	Dominance test	B1, B9, D2	F3
Wetland C	Plot 1	Forested	Red maple, silver maple, poison ivy, false nettle	Dominance test	B1, B9, D2	F3
Wetland D	Plot 1	Forested	Red maple, green ash, poison ivy	Dominance test	C9, D2	F3
Wetland D	Plot 2	Forested	Red maple, green ash, silver maple	Dominance test	B1, B9, C9, D2	F3
Wetland D	Plot 3	Forested	Red maple, green ash	Dominance test	A3, B9	F3, S3
Wetland D	Plot 4	Scrub-shrub, emergent	Silky dogwood, cattail hybrid, NY aster, rice cut grass	Rapid test	A3	F3
Wetland D	Plot 5	Scrub-shrub	Red maple, silky dogwood, green ash, Canada goldenrod	Dominance test	A3	F3
Wetland D	Plot 6	Scrub-shrub	Green ash, silky dogwood, lance leaved goldenrod	Dominance test	A3, B9	A11, F3
Wetland E	Plot 1	Forested	Silver maple, green ash	Rapid test	B1, B9, D2	F3

<sup>1</sup> Refer to Hydrophytic Vegetation Indicators in the *Interim Regional Supplement*

<sup>2</sup> Refer to Wetland Hydrology Indicators in the *Interim Regional Supplement*

<sup>3</sup> Refer to Hydric Soil Indicators in the *Interim Regional Supplement*

## **7.0 Summary and Conclusions**

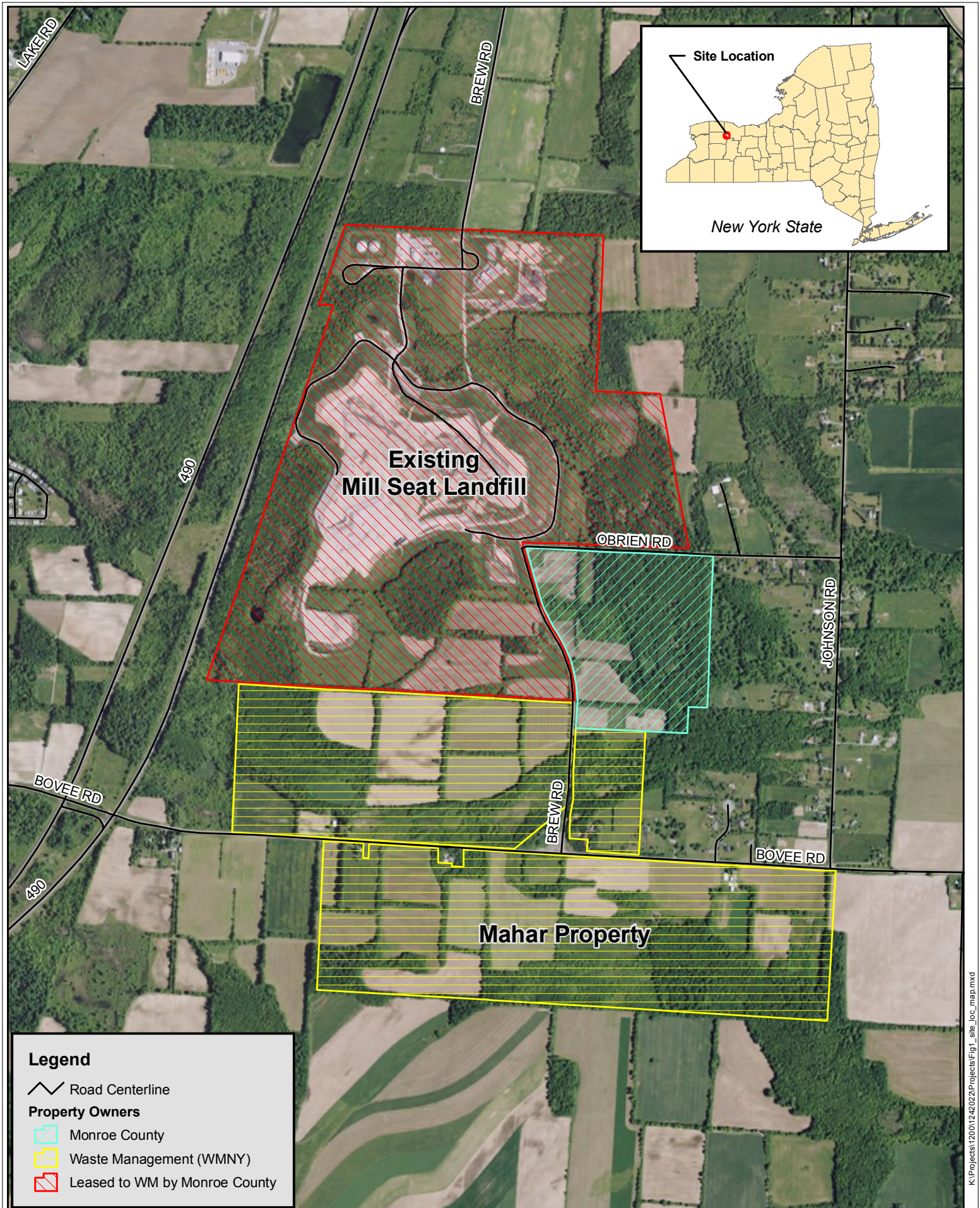
This wetland delineation was completed to determine the locations of freshwater wetlands and waters on the Mahar Property. Information from various desktop resources were reviewed prior to the field investigation and used to focus on particular areas of the Property. Five (5) wetlands were identified on the Mahar Property.

Based on the characteristics of Wetland D, this wetland is assumed to meet state and federal jurisdiction criteria. Any proposed impacts to this wetland in the future would require a review by the NYSDEC and the USACE in association with Article 24 of the New York State Environmental Conservation Law and Sections 401 and 404 of the Clean Water Act. Based on NYSDEC Freshwater Wetland Mapping, Wetland D is under the jurisdiction of the NYSDEC. The wetland and its 100-foot adjacent area are regulated by the NYSDEC. Any impacts to this wetland or the adjacent area would require coordination with the NYSDEC. Because hydrological, chemical, or biological connections were not observed in the field for Wetlands A, B, C, and E, these resources are assumed to be isolated, and therefore may not meet criteria for federal jurisdiction. A review by the USACE is required to confirm the preliminary isolated determination and their jurisdiction over Wetland D. An Approved Jurisdictional Determination can be requested from the USACE prior to a permit request.



## 8.0 Bibliography

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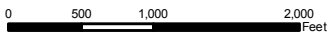


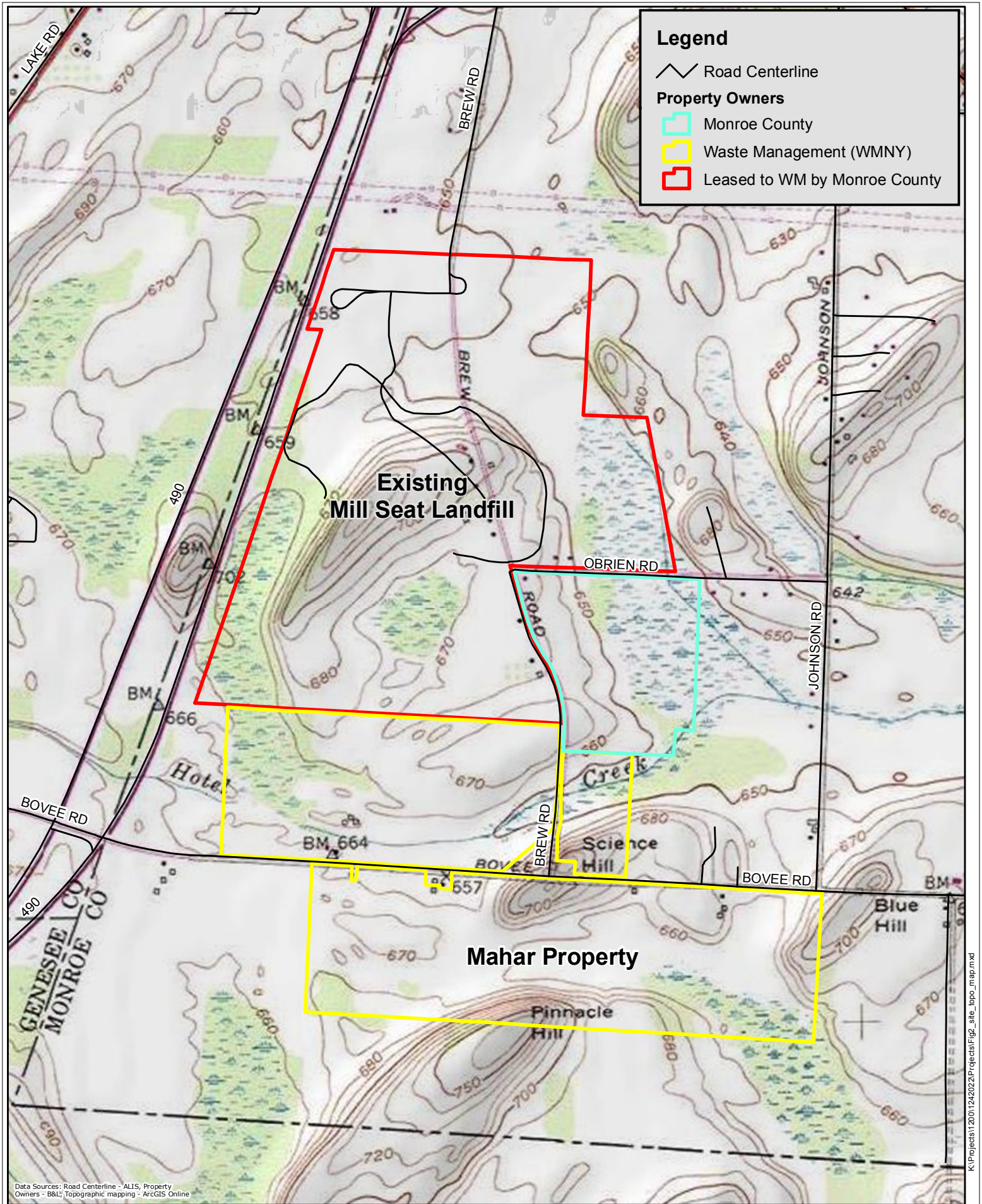
**Existing  
Mill Seat Landfill**

**Mahar Property**

**Legend**

-  Road Centerline
- Property Owners**
-  Monroe County
-  Waste Management (WMNY)
-  Leased to WM by Monroe County





**Legend**

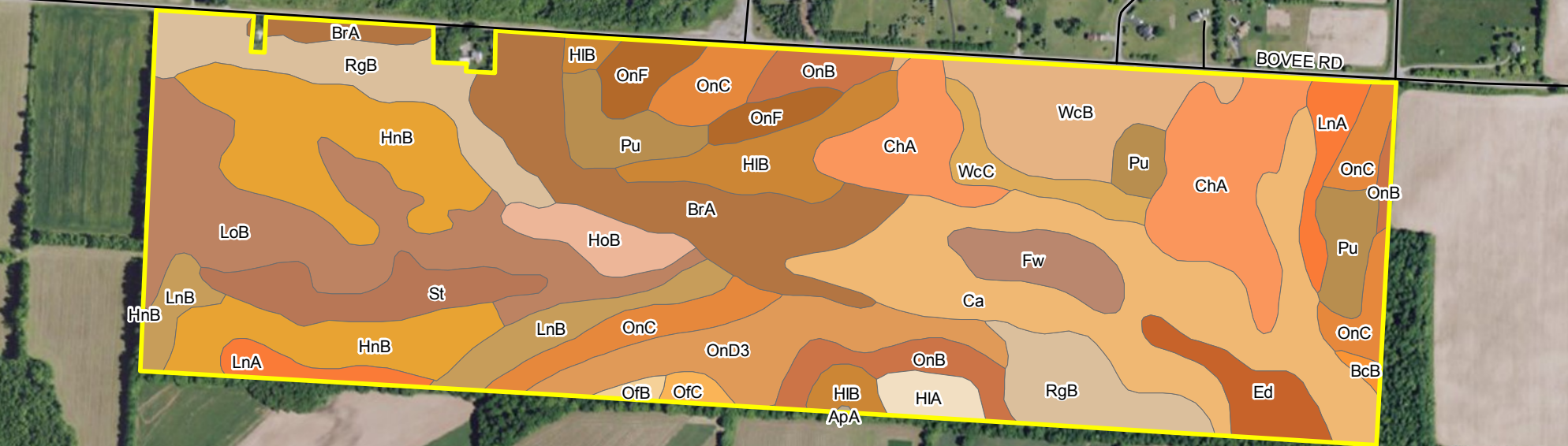
-  Road Centerline
- Property Owners**
-  Monroe County
-  Waste Management (WMNY)
-  Leased to WM by Monroe County

Data Sources: Road Centerline - ALIS, Property Owners - B&L, Topographic mapping - ArcGIS Online

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### Soils Legend

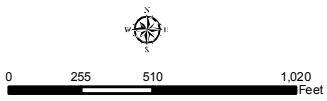
- ApA - Appleton loam, 0 to 3% slopes
- BcB - Benson channery loam, 0 to 8% slopes
- BrA - Brockport silty clay loam, 0 to 2% slopes
- Ca - Canandaigua silt loam
- ChA - Churchville silt loam, 0 to 2% slopes
- Ed - Edwards muck
- Fw - Freshwater marsh
- HIA - Hilton loam, 0 to 3% slopes
- HIB - Hilton loam, 3 to 8% slopes
- HnB - Honeoye silt loam, 3 to 8% slopes
- HoB - Honeoye silt loam, 3 to 8% slopes
- LnA - Lima silt loam, 0 to 3% slopes
- LnB - Lima silt loam, 3 to 8% slopes
- LoB - Lima and Cazenovia silt loams, 0 to 6% slopes
- OfB - Ontario fine sandy loam, 3 to 8% slopes
- OfC - Ontario fine sandy loam, 8 to 15% slopes
- OnB - Ontario loam, 15 to 25% slopes, eroded
- OnC - Ontario loam, 3 to 8% slopes
- OnD3 - Ontario loam, 8 to 15% slopes
- OnF - Ontario loam, 25 to 60% slopes
- Pu - Pits and quarries
- RgB - Riga silt loam, 2 to 8% slopes
- St - Sun loam, mod. shallow variant
- WcB - Wampsville cobbly loam, 3 to 8% slopes
- WcC - Wampsville cobbly loam, 8 to 15% slopes



**Legend**

- Road Centerline
- Field Delineated Boundary

Data Sources: Road Centerline - ALIS, Field Delin Boundary - B&L Aerials - ArcGIS Online, Soil mapping - NRCS/CUGIR



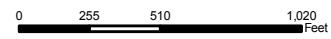
Waste Management of New York, LLC		Figure 3
<b>Soils Mapping</b>		Project No. 1242.022
Monroe County	December 2011	New York

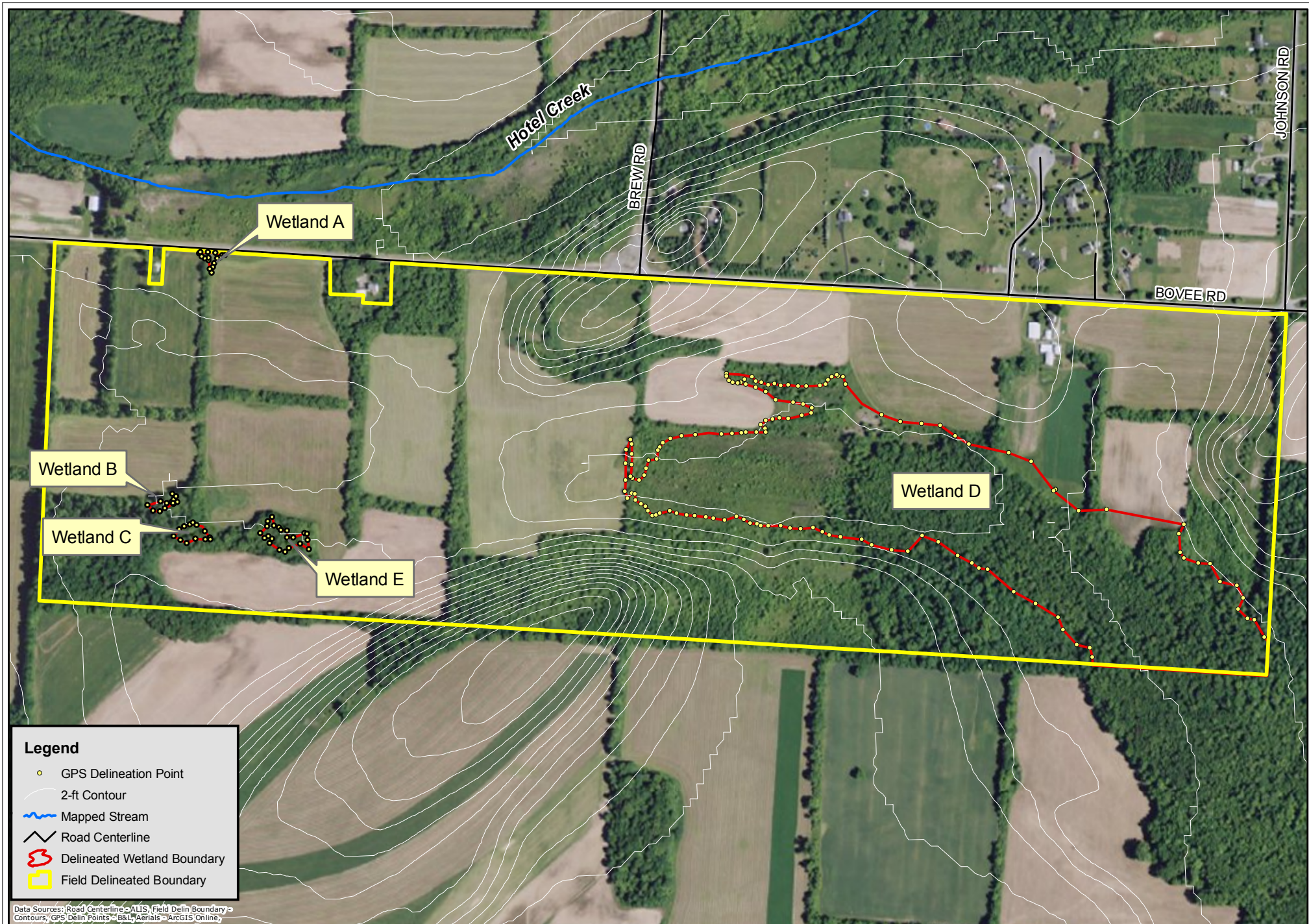
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**Legend**

- 2-ft Contour
- Mapped Stream
- Road Centerline
- Field Delineated Boundary
- NYSDEC Mapped Wetland
- NWI Mapped Wetland**
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

Data Sources: Road Centerline - ALIS; Field Delim Boundary - BGL; Aerials - AEGIS Online; Soil Mapping - NRCS/CUGIR

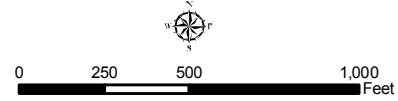




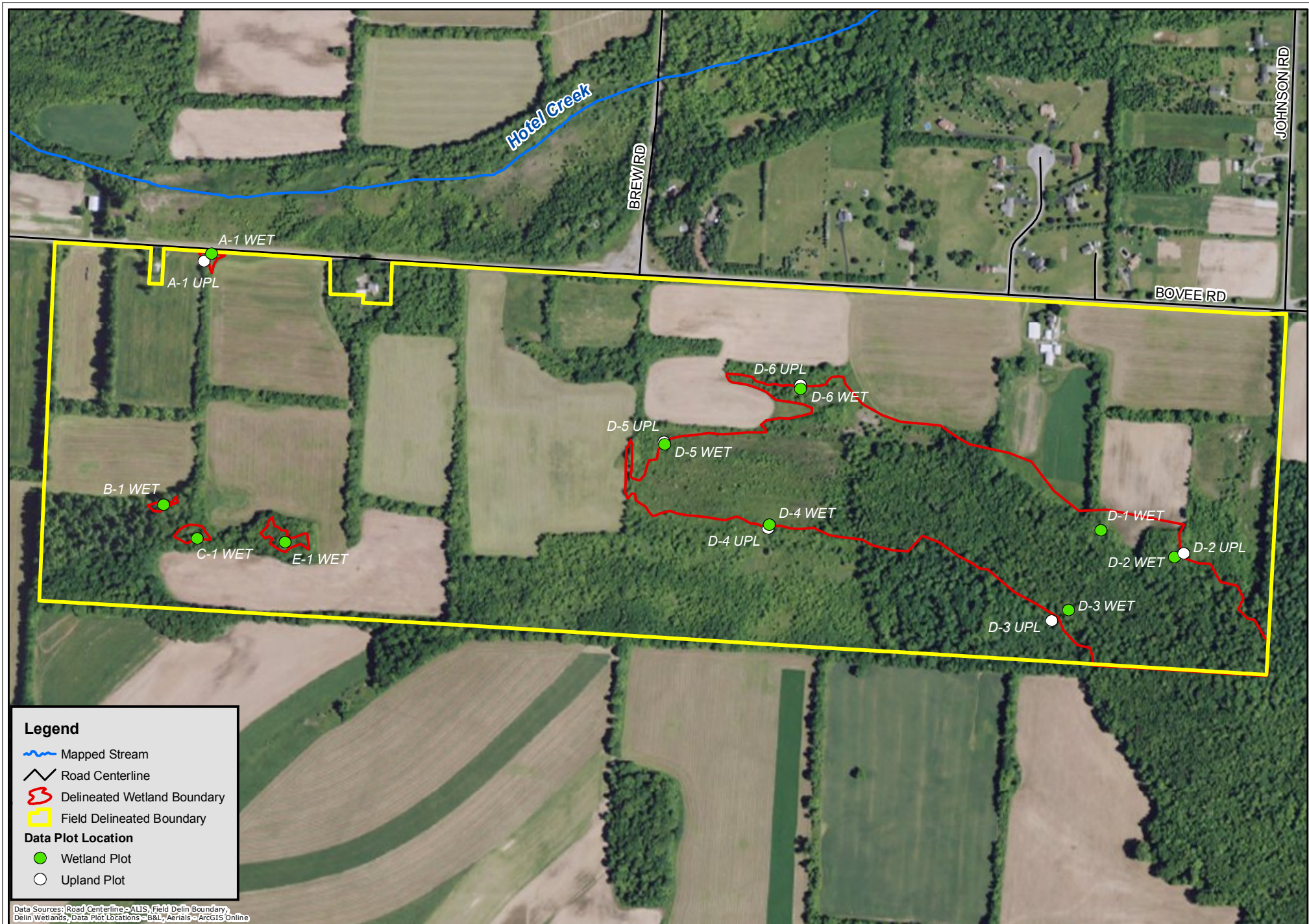
**Legend**

- GPS Delineation Point
- 2-ft Contour
- Mapped Stream
- Road Centerline
- Delineated Wetland Boundary
- Field Delineated Boundary

Data Sources: Road Centerline - ALIS; Field Delin Boundary - Contours; GPS Delin Points - B&L Aerials - ArcGIS Online;



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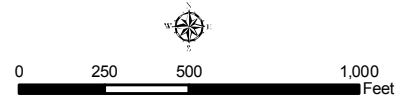
**Legend**

- Mapped Stream
- Road Centerline
- Delineated Wetland Boundary
- Field Delineated Boundary

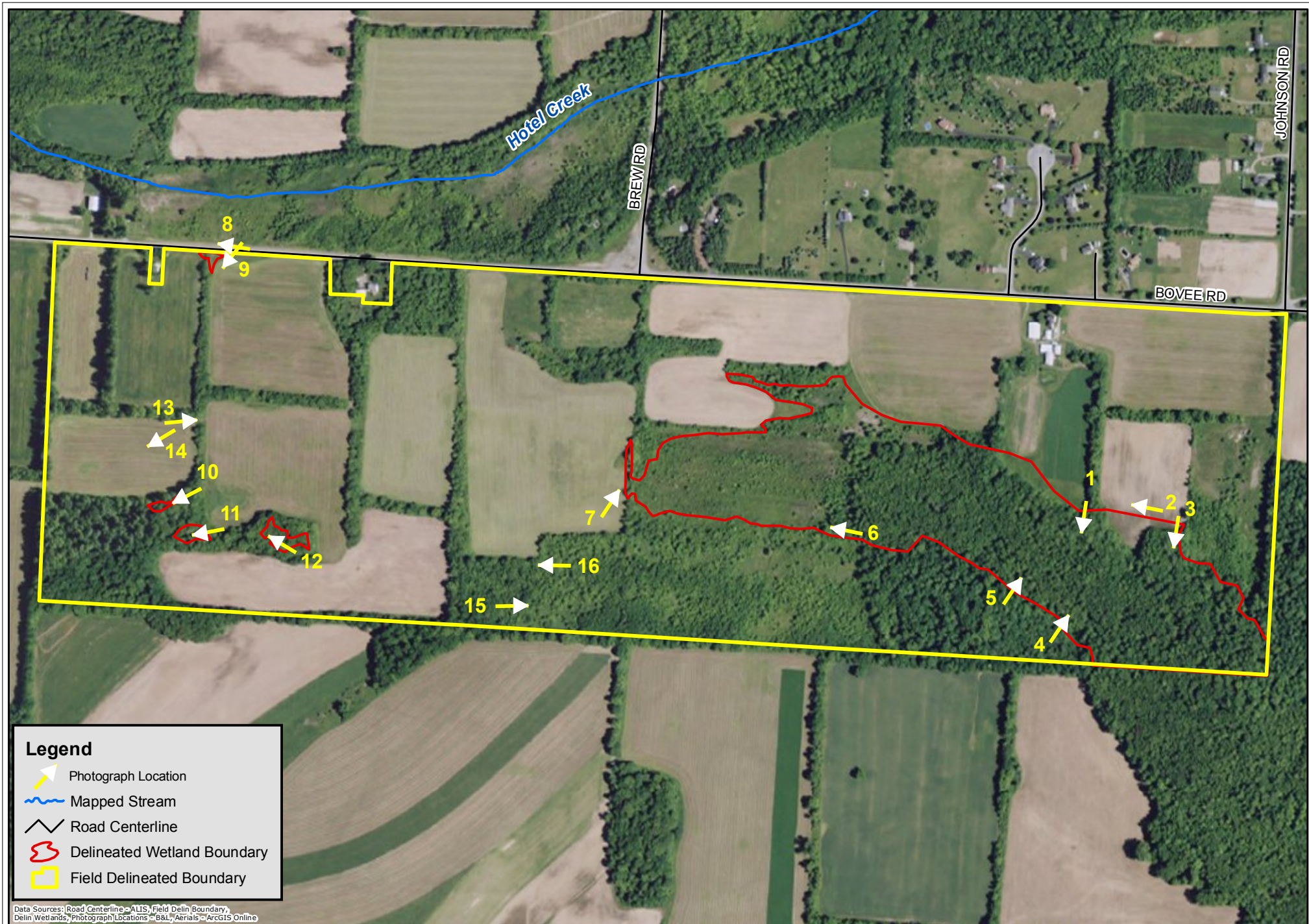
**Data Plot Location**

- Wetland Plot
- Upland Plot




Data Sources: Road Centerline - ALIS, Field Delin Boundary, Delin Wetlands, Data Plot Locations - B&L, Aerials - ArcGIS Online



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**Legend**

-  Photograph Location
-  Mapped Stream
-  Road Centerline
-  Delineated Wetland Boundary
-  Field Delineated Boundary

Data Sources: Road Centerline - ALIS; Field Delin Boundary, Delin Wetlands, Photograph Locations - B&L; Aerials - ArcGIS Online



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**Appendix A**  
**Wetland Field Delineation Datasheets**

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mahar Property City/County: Monroe County Sampling Date: 10/04/11  
 Applicant/Owner: Waste Management of New York, LLC State: New York Sampling Point: A-1 Wet  
 Investigator(s): Johanna E. Duffy, Barton & Loguidice, PC Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave  
 Slope (%): 0-2% Lat: 43° 2' 46.888" N Long: 77° 56' 10.637" W Datum: UTM NAD 83  
 Soil Map Unit Name: Brockport Silty Clay Loam, 0-2% slopes NWI classification: PSS1

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/>	No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____		If yes, optional Wetland Site ID: <u>Wetland A</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Microtopographic Relief (D4)
	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): 0  
 Water Table Present Yes  No \_\_\_\_\_ Depth (inches): 0 – surface  
 Saturation Present Yes  No \_\_\_\_\_ Depth (inches): 0 – surface **Wetland Hydrology Present?** Yes  No \_\_\_\_\_  
 (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 Aerial photo review completed prior to site investigation

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: A1-Wet

<i>Tree Stratum</i> (Plot Size: )		Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b> 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)
1.					
2.					
3.					
4.					
5.					
6.					
7.					
		= Total Cover			<b>Prevalence Index Worksheet:</b> 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 = _____
<i>Sapling/Shrub Stratum</i> (Plot Size: 15 feet )					
1.	<i>Salix discolor</i>	20	Yes	FACW	
2.					
3.					
4.					
5.					
6.					
7.					
50% = 10, 20% = 5		20	= Total Cover		
<i>Herb Stratum</i> (Plot Size: 10 feet )					
1.	<i>Typha angustifolia</i>	55	Yes	OBL	
2.	<i>Doellingeria umbellata</i>	10	No	FACW	
3.	<i>Symphyotrichum novi-belgii</i>	15	No	FACW	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
50% = 40, 20% = 16		80	= Total Cover		
<i>Woody Vine Stratum</i> : (Plot Size: 15 feet )					
1.	<i>Vitis riparia</i>	3	Yes	FACW	
2.					
3.					
4.					
5.					
6.					
7.					
50% = 1.5, 20% = 0.6		3	= Total Cover		
<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.					
<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.					
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Remarks: (Include photo numbers here or on a separate sheet.)  Photos 8 and 9					



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Mahar Property City/County: Monroe County Sampling Date: 10/04/11  
 Applicant/Owner: Waste Management of New York, LLC State: New York Sampling Point: A-1 Upl  
 Investigator(s): Johanna E. Duffy, Barton & Loguidice, PC Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave  
 Slope (%): 0-2% Lat: 43° 2' 46.864" N Long: 77° 56' 9.825" W Datum: UTM NAD 83  
 Soil Map Unit Name:: Brockport Silty Clay Loam, 0-2% slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	X
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		Yes _____ No _____
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>		If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): 0  
 Water Table Present Yes \_\_\_\_\_ No  Depth (inches): >12.0  
 Saturation Present Yes \_\_\_\_\_ No  Depth (inches): >12.0 **Wetland Hydrology Present? Yes \_\_\_\_\_ No**   
 (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 Aerial photo review completed prior to site investigation

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: A1-Upl

Tree Stratum (Plot Size: )	Absolute % Cover	Dominant Species?	Indicator Status		
1.				<b>Dominance Test Worksheet:</b>	
2.				Number of Dominant Species	
3.				That Are OBL, FACW, or FAC: <u>1</u> (A)	
4.				Total Number of Dominant	
5.				Species Across All Strata: <u>3</u> (B)	
6.				Percent of Dominant Species	
7.				That Are OBL, FACW, or FAC: <u>.3333 (33%)</u> (A/B)	
			= Total Cover		
Sapling/Shrub Stratum (Plot Size: 15 feet )					
1. <i>Cornus amomum</i>	25	Yes	FACW	<b>Prevalence Index Worksheet:</b>	
2.				Total % Cover of:                      Multiply by:	
3.				OBL species <u>0</u> x 1 = <u>0</u>	
4.				FACW species <u>2</u> x 2 = <u>4</u>	
5.				FAC species <u>0</u> x 3 = <u>0</u>	
6.				FACU species <u>2</u> x 4 = <u>8</u>	
7.				UPL species <u>2</u> x 5 = <u>10</u>	
50% = 12.5, 20% = 5			25	Column Totals: <u>6</u> (A) <u>22</u> (B)	
			= Total Cover	Prevalence Index = B/A = <u>3.6667</u>	
Herb Stratum (Plot Size: 5 feet )					
1. <i>Zea mays</i>	20	Yes	NI	<b>Hydrophytic Vegetation Indicators:</b>	
2. <i>Dipsacus fullonum</i>	5	No	NI	- Rapid Test for Hydrophytic Vegetation	
3. <i>Phleum pratense</i>	10	No	FACU	- Dominance Test is >50%	
4. <i>Doellingeria umbellata</i>	15	No	FACW	- Prevalence Index is <=3.0 <sup>1</sup>	
5. <i>Hieracium caespitosum</i>	2	No	UPL	- Morphological Adaptations <sup>1</sup> (Provide supporting	
6. <i>Plantago lanceolata</i>	2	No	UPL	Data in Remarks or on a separate sheet)	
7. <i>Andropogon virginicus</i>	40	Yes	FACU	- Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
8.				<sup>1</sup> Indicators of hydric soil and wetland hydrology must	
9.				Be present, unless disturbed or problematic.	
10.				<b>Definitions of Vegetation Strata:</b>	
11.				<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter	
12.				at breast height (DBH), regardless of height.	
13.				<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH	
14.				and greater than 3.28 ft (1 m) tall.	
50% = 47, 20% = 18.8			94	<b>Herb</b> – All herbaceous (non-woody) plants, regardless	
			= Total Cover	of size, and woody plants less than 3.28 ft tall.	
Woody Vine Stratum: (Plot Size: feet )					
1.				<b>Woody vines</b> – All woody vines greater than 3.28 ft in	
2.				height.	
3.					
4.					
5.				<b>Hydrophytic</b>	
6.				<b>Vegetation</b>	
7.				<b>Present?</b> Yes <u>      </u> No <u>X</u>	
			= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.)					

**SOIL**

Sampling Point: A1- upl

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10 YR 4/2	100	-	-	-	-	Clay loam	
7-12+	10 YR 4/2	95	10 YR 4/4	5	C	M	Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS= Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R, MLRA 149B</b> )	<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR K, L, MLRA 149B</b> )	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B</b> )	<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>LRR K, L, 4</b> )	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L</b> )	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) ( <b>LRR K, L</b> )	
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>BLRR K, L</b> )	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox DarkSurface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR K, L</b> )	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR K, L, R</b> )	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 149B</b> )	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )	
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Striped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B</b> )		<input type="checkbox"/> Other (Explain in Remarks)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b>	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks:

BrA – potential for hydric inclusions

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Mahar Property City/County: Monroe County Sampling Date: 10/04/11  
 Applicant/Owner: Waste Management of New York, LLC State: New York Sampling Point: B-1 Wet  
 Investigator(s): Johanna E. Duffy, Barton & Loguidice, PC Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave  
 Slope (%): 0-2% Lat: 43° 2' 35.736" N Long: 77° 56' 14.012" W Datum: UTM NAD 83  
 Soil Map Unit Name: Sun loam, moderately shallow variant NWI classification: PFO1

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____		If yes, optional Wetland Site ID: <u>Wetland B</u>

Remarks: (Explain alternative procedures here or in a separate report.)

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
<input checked="" type="checkbox"/> Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): 0  
 Water Table Present Yes \_\_\_\_\_ No  Depth (inches): >12.0  
 Saturation Present Yes \_\_\_\_\_ No  Depth (inches): >12.0 **Wetland Hydrology Present? Yes  No \_\_\_\_\_**  
 (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 Aerial photo review completed prior to site investigation

Remarks:  
 Seasonal inundation and saturation of soils



**VEGETATION** – Use scientific names of plants.

Sampling Point: B1-Wet

Tree Stratum (Plot Size: 30 feet )	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Acer saccharinum</i>	45	Yes	FACW	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. <i>Fraxinus pennsylvanica</i>	15	Yes	FACW	
3.				
4.				
5.				
6.				
7.				
50% = 30, 20% = 12	60	= Total Cover		
Sapling/Shrub Stratum (Plot Size: feet )				<b>Prevalence Index Worksheet:</b> 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 = _____
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Herb Stratum (Plot Size: 5 feet )				<b>Hydrophytic Vegetation Indicators:</b> - Rapid Test for Hydrophytic Vegetation X Dominance Test is >50% Prevalence Index is <=3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.  <b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.  <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No    _____
1. <i>Toxicodendron radicans</i>	5	Yes	FAC	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
50% = 2.5, 20% = 1	5	= Total Cover		
Woody Vine Stratum: (Plot Size: 15 feet )				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.)				
Photo 10				

**SOIL**

Sampling Point: B1- wet

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10 YR 3/1	100	-	-	-	-	-	Organic surface layer
2-8	10 YR 4/1	80	10 YR 5/6	15	C	M	Loam	
			7.5 YR 5/8	5	C	M		
8-10+	10 YR 4/1	78	10 YR 5/6	15	C	M	Silty clay loam	Roots made it difficult to sample further
			7.5 YR 5/8	5	C	M		
			10 YR 6/1	2	C	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS= Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R, MLRA 149B</b> )	<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR K, L, MLRA 149B</b> )	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B</b> )	<input type="checkbox"/> Coast Prairie Redox (A16) ( <b>LRR K, L, 4</b> )	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L</b> )	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) ( <b>LRR K, L</b> )	
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>BLRR K, L</b> )	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox DarkSurface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR K, L</b> )	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR K, L, R</b> )	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 149B</b> )	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )	
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Striped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Dark Surface (S7) ( <b>LRR R, MLRA 149B</b> )		<input type="checkbox"/> Other (Explain in Remarks)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b>	
Type: _____	
Depth (inches): _____	
	<b>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>

Remarks:

St – local hydric soil unit

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mahar Property City/County: Monroe County Sampling Date: 10/04/11  
 Applicant/Owner: Waste Management of New York, LLC State: New York Sampling Point: C-1 Wet  
 Investigator(s): Johanna E. Duffy, Barton & Loguidice, PC Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave  
 Slope (%): 0-2% Lat: 43° 2' 34.649" N Long: 77° 56' 12.234" W Datum: UTM NAD 83  
 Soil Map Unit Name: Sun loam, moderately shallow variant NWI classification: PFO1

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/>	No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____		If yes, optional Wetland Site ID: <u>Wetland C</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Microtopographic Relief (D4)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**  
 Surface Water Present? Yes  No \_\_\_\_\_ Depth (inches): 4.0  
 Water Table Present Yes  No \_\_\_\_\_ Depth (inches): 0 - surface  
 Saturation Present Yes  No \_\_\_\_\_ Depth (inches): 0 - surface **Wetland Hydrology Present?** Yes  No \_\_\_\_\_  
 (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
Aerial photo review completed prior to site investigation

Remarks:  
Seasonal inundation and saturation of soils  
Shallow root zone observed

**VEGETATION** – Use scientific names of plants.

Sampling Point: C1-Wet

Tree Stratum (Plot Size: 30 feet )	Absolute % Cover	Dominant Species?	Indicator Status				
1. <i>Acer saccharinum</i>	45	Yes	FACW	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)			
2. <i>Acer rubrum</i>	20	Yes	FAC				
3.							
4.							
5.							
6.							
7.							
50% = 32.5, 20% = 13	65	= Total Cover				<b>Prevalence Index Worksheet:</b> 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 = _____	
Sapling/Shrub Stratum (Plot Size: feet )							
1.							
2.							
3.							
4.							
5.							
6.							
		= Total Cover					
Herb Stratum (Plot Size: 5 feet )							
1. <i>Toxicodendron radicans</i>	5	Yes	FAC	<b>Hydrophytic Vegetation Indicators:</b> - Rapid Test for Hydrophytic Vegetation X Dominance Test is >50% Prevalence Index is <=3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.			
2. <i>Boehmeria cylindrica</i>	3	Yes	FACW				
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
50% = 4, 20% = 1.6	8	= Total Cover					
Woody Vine Stratum: (Plot Size: 15 feet )							
1.				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.			
2.							
3.							
4.							
5.							
6.							
7.							
		= Total Cover		<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No    _____			
Remarks: (Include photo numbers here or on a separate sheet.)							
Photo 10							



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: \_\_\_\_\_ City/County: Monroe Sampling Date: 10/7/11  
 Applicant/Owner: Waste Management of New York, LLC State: NY Sampling Point: D-1 WET  
 Investigator(s): Todd J. Phillips Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave  
 Slope (%): 0-2 Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD 83  
 Soil Map Unit Name: Ca-Canandaigua Silt Loam NWI classification: PFO1E

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____		If yes, optional Wetland Site ID: <u>D-1 WET</u>

Remarks: (Explain alternative procedures here or in a separate report.)

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Saturation Present Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_ **Wetland Hydrology Present? Yes  No \_\_\_\_\_**  
 (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 Very tight soils, two secondary indicators present, soil expected to be saturated during spring and initial plant growth.

**VEGETATION** – Use scientific names of plants.

Sampling Point: D1-WET

<i>Tree Stratum</i> (Plot Size: 30 feet )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
1. Acer rubrum	60	YES	FAC		
2. Fraxinus pennsylvanica	20	YES	FACW		
3. Populus deltoides	3	NO	FAC		
4.					
5.					
6.					
7.					
	83	= Total Cover			
<i>Sapling/Shrub Stratum</i> (Plot Size: 15 feet )				<b>Prevalence Index Worksheet:</b>  <div style="display: flex; justify-content: space-between;"> <span><u>Total % Cover of:</u></span> <span><u>Multiply by:</u></span> </div> 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 = _____	
1. Fraxinus pennsylvanica	5	YES	FAC		
2.					
3.					
4.					
5.					
6.					
7.					
	5	= Total Cover			
<i>Herb Stratum</i> (Plot Size: 5 feet )				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is #3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
1. Fraxinus pennsylvanica	3	YES	FAC		
2. Toxicodendron radicans	3	YES	FAC		
3. Rosa spp.	-	-	-		
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
	6	= Total Cover			
<i>Woody Vine Stratum:</i> (Plot Size: 30 feet )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
1.					
2.					
3.					
4.					
5.					
6.					
7.					
		= Total Cover			
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____	





**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: \_\_\_\_\_ City/County: Monroe Sampling Date: 10/7/11  
 Applicant/Owner: Waste Management of New York, LLC State: NY Sampling Point: D-2 WET  
 Investigator(s): Todd J. Phillips Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Convex  
 Slope (%): 0-2 Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD 83  
 Soil Map Unit Name: Ca-Canandaigua Silt Loam NWI classification: PFO1E

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____		

Remarks: (Explain alternative procedures here or in a separate report.)

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe) **Wetland Hydrology Present?** Yes  No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: D2-WET

<i>Tree Stratum</i> (Plot Size: 30 feet )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)			
1. Acer rubrum	60	YES	FAC			<b>Prevalence Index Worksheet:</b>  <u>        </u> <b>Total % Cover of:</b> <u>        </u> <b>Multiply by:</b> OBL species <u>        </u> x 1 = <u>        </u> FACW species <u>        </u> x 2 = <u>        </u> FAC species <u>        </u> x 3 = <u>        </u> FACU species <u>        </u> x 4 = <u>        </u> UPL species <u>        </u> x 5 = <u>        </u> Column Totals: <u>        </u> (A) <u>        </u> (B)  Prevalence Index = B/A =	
2. Fraxinus pennsylvanica	15	YES	FACW				
3. Populus deltoides	3	NO	FAC				
4.							
5.							
6.							
7.							
	78	= Total Cover					
<i>Sapling/Shrub Stratum</i> (Plot Size: 15 feet )				<b>Hydrophytic Vegetation Indicators:</b> <u>        </u> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <u>        </u> Prevalence Index is #3.0 <sup>1</sup> <u>        </u> Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.			
1. Fraxinus pennsylvanica	10	YES	FAC				
2. Acer saccharinum	5	YES	FACW				
3.							
4.							
5.							
6.							
7.							
	15	= Total Cover					
<i>Herb Stratum</i> (Plot Size: 5 feet )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.  <b>Hydrophytic Vegetation Present?</b> Yes <u> X </u> No <u>        </u>			
1. Rosa spp.	-	-	-				
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
	-	= Total Cover					
<i>Woody Vine Stratum:</i> (Plot Size: 30 feet )				<b>Hydrophytic Vegetation Present?</b> Yes <u> X </u> No <u>        </u>			
1.							
2.							
3.							
4.							
5.							
6.							
7.							
	-	= Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)							



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: \_\_\_\_\_ City/County: Monroe Sampling Date: 10/7/11  
 Applicant/Owner: Waste Management of New York, LLC State: NY Sampling Point: D-2 DRY  
 Investigator(s): Todd J. Phillips Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave  
 Slope (%): 0-2 Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD 83  
 Soil Map Unit Name: Ca-Canandaigua Silt Loam NWI classification: \_\_\_\_\_

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>		Yes _____ No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>		If yes, optional Wetland Site ID: <u>D-2 DRY</u>

Remarks: (Explain alternative procedures here or in a separate report.)

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

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

Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Moss Trim Lines (B16)                     |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> Microtopographic Relief (D4)              |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Saturation Present Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present? Yes \_\_\_\_\_ No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: D2-DRY

<i>Tree Stratum</i> (Plot Size: 30 feet )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40</u> (A/B)			
1. Acer rubrum	20	YES	FAC				
2. Prunus pensylvanica	7	YES	FACU				
3. Prunus serotina	7	YES	UPL				
4.							
5.							
6.							
7.							
	34	= Total Cover		<b>Prevalence Index Worksheet:</b>  <div style="display: flex; justify-content: space-between;"> <span><u>Total % Cover of:</u></span> <span><u>Multiply by:</u></span> </div> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>3</u> x 2 = <u>6</u> FAC species <u>45</u> x 3 = <u>135</u> FACU species <u>22</u> x 4 = <u>88</u> UPL species <u>7</u> x 5 = <u>35</u> Column Totals: <u>77</u> (A) <u>264</u> (B)  Prevalence Index = B/A = <u>3.4</u>			
<i>Sapling/Shrub Stratum</i> (Plot Size: 15 feet )							
1. Cornus racemosa	25	YES	FAC				
2. Lonicera tatarica	5	NO	FACU				
3. Fraxinus americana	5	NO	FACU				
4.							
5.							
6.							
7.							
	35	= Total Cover					
<i>Herb Stratum</i> (Plot Size: 5 feet )				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is #3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.			
1. Rosa spp.	-	-	-				
2. Lonicera tatarica	5	YES	FACU				
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
	5	= Total Cover					
<i>Woody Vine Stratum:</i> (Plot Size: 30 feet )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.			
1. Vitis riparia	3	YES	FACW				
2.							
3.							
4.							
5.							
6.							
7.							
	3	= Total Cover		<b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u> X </u>			
Remarks: (Include photo numbers here or on a separate sheet.)							



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: \_\_\_\_\_ City/County: Monroe Sampling Date: 10/7/11  
 Applicant/Owner: Waste Management of New York, LLC State: NY Sampling Point: D-3 WET  
 Investigator(s): Todd J. Phillips Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Convex  
 Slope (%): 0-2 Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD 83  
 Soil Map Unit Name: Ca-Canandaigua Silt Loam NWI classification: PFO1E

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____		If yes, optional Wetland Site ID: <u>D-3 WET</u>

Remarks: (Explain alternative procedures here or in a separate report.)

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Saturation Present Yes  No \_\_\_\_\_ Depth (inches): 7"  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: D3-WET

<i>Tree Stratum</i> (Plot Size: 30 feet )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																									
1. Acer rubrum	60	YES	FAC																										
2.																													
3.																													
4.																													
5.																													
6.																													
7.																													
	60	= Total Cover		<b>Prevalence Index Worksheet:</b>  <div style="display: flex; justify-content: space-between;"> <span><u>Total % Cover of:</u></span> <span><u>Multiply by:</u></span> </div> 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 = _____																									
<i>Sapling/Shrub Stratum</i> (Plot Size: 15 feet )																													
1. Fraxinus pennsylvanica	15	YES	FAC																										
2. Acer rubrum	3	YES	FAC																										
3.																													
4.																													
5.																													
6.																													
7.																													
	18	= Total Cover																											
<i>Herb Stratum</i> (Plot Size: 5 feet )																								<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is #3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.					
1. Rosa spp.	-	-	-																										
2.																													
3.																													
4.																													
5.																													
6.																													
7.																													
8.																													
9.																													
10.																													
11.																													
12.																													
13.																													
14.																													
	-	= Total Cover																											
<i>Woody Vine Stratum:</i> (Plot Size: 30 feet )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																									
1.																													
2.																													
3.																													
4.																													
5.																													
6.																													
7.																													
	-	= Total Cover																											
Remarks: (Include photo numbers here or on a separate sheet.)						<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____																							





**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: \_\_\_\_\_ City/County: Monroe Sampling Date: 10/7/11  
 Applicant/Owner: Waste Management of New York, LLC State: NY Sampling Point: D-3 UPL  
 Investigator(s): Todd J. Phillips Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave  
 Slope (%): 2-8 Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD 83  
 Soil Map Unit Name: RgB-Riga Silt Loam NWI classification: \_\_\_\_\_

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	If yes, optional Wetland Site ID: <u>D-3 UPL</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

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

Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Moss Trim Lines (B16)                     |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> Microtopographic Relief (D4)              |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Saturation Present Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_ **Wetland Hydrology Present? Yes \_\_\_\_\_ No**   
 (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: D3-UPL

<i>Tree Stratum</i> (Plot Size: 30 feet )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33</u> (A/B)
1. Acer sacchrum	20	YES	FACU	
2. Crataegus spp.	-	-	-	
3. Prunus serotina	7	No	UPL	
4. Malus spp.	-	-	-	
5. Ulmus americana	10	YES	FACW	
6.				
7.				
	37	= Total Cover		
<i>Sapling/Shrub Stratum</i> (Plot Size: 15 feet )				<b>Prevalence Index Worksheet:</b>  <div style="display: flex; justify-content: space-between;"> <span><u>Total % Cover of:</u></span> <span><u>Multiply by:</u></span> </div> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>12</u> x 5 = <u>60</u> Column Totals: <u>42</u> (A) <u>160</u> (B)  Prevalence Index = B/A = <u>3.8</u>
1.				
2.				
3.				
4.				
5.				
6.				
7.				
		= Total Cover		
<i>Herb Stratum</i> (Plot Size: 5 feet )				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is #3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.
1. Symphyotrichum porteri	5	YES	NI	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
	5	= Total Cover		
<i>Woody Vine Stratum:</i> (Plot Size: 30 feet )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	-	= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u>  X  </u>

**SOIL**

Sampling Point: D-3 UPL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/1	100					Sandy Loam	
4-9	10YR 4/2	100					Sandy Loam	
9-14+	10YR 5/3	45	10YR 5/4	40		M		Mixed matrix
			10YR 4/4	5	C	PL		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS= Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:		Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, 4)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)	
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (BLRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox DarkSurface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Striped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b> Type: _____ Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mahar Property City/County: Monroe County Sampling Date: 10/07/11  
 Applicant/Owner: Waste Management of New York, LLC State: New York Sampling Point: D-4 Wet  
 Investigator(s): Johanna E. Duffy, Barton & Loguidice, PC Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave  
 Slope (%): 0-2% Lat: 43° 2' 34.549" N Long: 77° 55' 36.85" W Datum: UTM NAD 83  
 Soil Map Unit Name: Canandaigua Silt Loam NWI classification: PSS1/PEM1

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/>	No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____		If yes, optional Wetland Site ID: <u>Wetland D</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

### HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): 0  
 Water Table Present Yes \_\_\_\_\_ No  Depth (inches): >12.0  
 Saturation Present Yes  No \_\_\_\_\_ Depth (inches): 0 - surface **Wetland Hydrology Present?** Yes \_\_\_\_\_ No   
 (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
Aerial photo review completed prior to site investigation

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: D4-Wet

Tree Stratum (Plot Size: 30 feet )	Absolute % Cover	Dominant Species?	Indicator Status	
1.				<b>Dominance Test Worksheet:</b> 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)
2.				
3.				
4.				
5.				
6.				
7.				
= Total Cover				<b>Prevalence Index Worksheet:</b> 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 = _____
<b>Sapling/Shrub Stratum (Plot Size: 15 feet )</b>				
1. <i>Cornus amomum</i>	10	Yes	FACW	
2.				
3.				
4.				
5.				
6.				
7.				
50% = 5, 20% = 2			10	
<b>Herb Stratum (Plot Size: 5 feet )</b>				
1. <i>Typha x glauca</i>	20	Yes	OBL	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation _____ Dominance Test is >50% _____ Prevalence Index is <=3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.
2. <i>Symphotrichum novi-belgii</i>	25	Yes	FACW	
3. <i>Leersia oryzoides</i>	30	Yes	OBL	
4. <i>Epilobium hirsutum</i>	5	No	FACW	
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
50% = 40, 20% = 16			80	
<b>Woody Vine Stratum: (Plot Size: 15 feet )</b>				
1. <i>Vitis riparia</i>	2	Yes	FACW	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
2.				
3.				
4.				
5.				
6.				
7.				
50% = 1, 20% = 0.4			2	
<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No    _____				

Remarks: (Include photo numbers here or on a separate sheet.)  
 Photos 1 - 7



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mahar Property City/County: Monroe County Sampling Date: 10/07/11  
 Applicant/Owner: Waste Management of New York, LLC State: New York Sampling Point: D-4 Upl  
 Investigator(s): Johanna E. Duffy, Barton & Loguidice, PC Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave  
 Slope (%): 0-2% Lat: 43° 2' 34.693" N Long: 77° 55' 36.78" W Datum: UTM NAD 83  
 Soil Map Unit Name: Canandaigua Silt Loam NWI classification: \_\_\_\_\_

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes _____	No _____	X
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____		Yes _____	No _____	
Wetland Hydrology Present?	Yes _____	No <input checked="" type="checkbox"/>	If yes, optional Wetland Site ID: _____			

Remarks: (Explain alternative procedures here or in a separate report.)

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b>	<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): 0  
 Water Table Present Yes \_\_\_\_\_ No  Depth (inches): >12.0  
 Saturation Present Yes \_\_\_\_\_ No  Depth (inches): >12.0 **Wetland Hydrology Present?** Yes \_\_\_\_\_ No   
 (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 Aerial photo review completed prior to site investigation

Remarks:



**VEGETATION** – Use scientific names of plants.

Sampling Point: D4-Upl

<i>Tree Stratum</i> (Plot Size: 30 feet )	Absolute % Cover	Dominant Species?	Indicator Status				
1.				<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>.75 (75%)</u> (A/B)			
2.							
3.							
4.							
5.							
6.							
7.							
			= Total Cover	<b>Prevalence Index Worksheet:</b> 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 = _____			
<i>Sapling/Shrub Stratum</i> (Plot Size: 15 feet )							
1. <i>Cornus amomum</i>	10	Yes	FACW				
2.							
3.							
4.							
5.							
6.							
7.							
50% = 5, 20% = 2			10	= Total Cover			
<i>Herb Stratum</i> (Plot Size: 5 feet )				<b>Hydrophytic Vegetation Indicators:</b> - Rapid Test for Hydrophytic Vegetation X Dominance Test is >50% _____ Prevalence Index is <=3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.			
1. <i>Solidago rugosa</i>	25	Yes	FAC				
2. <i>Symphyotrichum novi-belgii</i>	20	Yes	FACW				
3. <i>Poa annua</i>	40	Yes	FACU				
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
50% = 42.5, 20% = 17			85	= Total Cover			
<i>Woody Vine Stratum:</i> (Plot Size: 15 feet )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.			
1.							
2.							
3.							
4.							
5.							
6.							
7.							
			= Total Cover	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No    _____			
Remarks: (Include photo numbers here or on a separate sheet.)							



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Mahar Property City/County: Monroe County Sampling Date: 10/07/11  
 Applicant/Owner: Waste Management of New York, LLC State: New York Sampling Point: D-5 Wet  
 Investigator(s): Johanna E. Duffy, Barton & Loguidice, PC Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave  
 Slope (%): 0-2% Lat: 43° 2' 38.354" N Long: 77° 55' 43.102" W Datum: UTM NAD 83  
 Soil Map Unit Name: Brockport Silty Clay Loam, 0-2% slopes NWI classification: PSS1

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____		

Remarks: (Explain alternative procedures here or in a separate report.)

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
<input checked="" type="checkbox"/> Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): 0  
 Water Table Present Yes \_\_\_\_\_ No  Depth (inches): >12.0  
 Saturation Present Yes  No \_\_\_\_\_ Depth (inches): 3.0 **Wetland Hydrology Present?** Yes  No \_\_\_\_\_  
 (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 Aerial photo review completed prior to site investigation

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: D5-Wet

<i>Tree Stratum</i> (Plot Size: 30 feet )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Acer rubrum</i>			5	Yes	FAC
2.						
3.						
4.						
5.						
6.						
7.						
50% = 2.5, 20% = 1				5	= Total Cover	
<i>Sapling/Shrub Stratum</i> (Plot Size: 15 feet )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Cornus racemosa</i>			45	Yes	FAC
2.	<i>Fraxinus pennsylvanica</i>			25	Yes	FACW
3.						
4.						
5.						
6.						
7.						
50% = 35, 20% = 14				70	= Total Cover	
<i>Herb Stratum</i> (Plot Size: 5 feet )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Doellingeria umbellata</i>			8	No	FACW
2.	<i>Solidago canadensis</i>			15	Yes	FACU
3.	<i>Erigeron annuus</i>			5	No	FACU
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
50% = 14, 20% = 5.6				28	= Total Cover	
<i>Woody Vine Stratum</i> : (Plot Size: 15 feet )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Vitis riparia</i>			2	Yes	FACW
2.						
3.						
4.						
5.						
6.						
7.						
50% = 1, 20% = 0.4				2	= Total Cover	

<b>Dominance Test Worksheet:</b>	
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>4</u> (A)
Total Number of Dominant Species Across All Strata:	<u>5</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0.80 (80%)</u> (A/B)
<b>Prevalence Index Worksheet:</b>	
Total % Cover of:	Multiply by:
OBL species	<u>        </u> x 1 = <u>        </u>
FACW species	<u>        </u> x 2 = <u>        </u>
FAC species	<u>        </u> x 3 = <u>        </u>
FACU species	<u>        </u> x 4 = <u>        </u>
UPL species	<u>        </u> x 5 = <u>        </u>
Column Totals:	<u>        </u> (A) <u>        </u> (B)
Prevalence Index = B/A = <u>        </u>	
<b>Hydrophytic Vegetation Indicators:</b>	
-	Rapid Test for Hydrophytic Vegetation
X	Dominance Test is >50%
	Prevalence Index is $\leq 3.0^1$
	Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet)
	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
<b>Definitions of Vegetation Strata:</b>	
<b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.	
<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
<b>Hydrophytic Vegetation Present?</b> Yes <u>  X  </u> No <u>      </u>	

Remarks: (Include photo numbers here or on a separate sheet.)  
Photos 1 - 7





**VEGETATION** – Use scientific names of plants.

Sampling Point: D5-Upl

<i>Tree Stratum</i> (Plot Size: 30 feet )	Absolute % Cover	Dominant Species?	Indicator Status		
1.				<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.66 (67%)</u> (A/B)	
2.					
3.					
4.					
5.					
6.					
7.					
			= Total Cover		
<i>Sapling/Shrub Stratum</i> (Plot Size: 15 feet )				<b>Prevalence Index Worksheet:</b> 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 = _____	
1. <i>Cornus racemosa</i>	85	Yes	FAC		
2.					
3.					
4.					
5.					
6.					
50% = 42.5, 20% = 17			85	= Total Cover	
<i>Herb Stratum</i> (Plot Size: 5 feet )				<b>Hydrophytic Vegetation Indicators:</b> - Rapid Test for Hydrophytic Vegetation X Dominance Test is >50% Prevalence Index is <=3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.  <b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.  <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No    _____	
1. <i>Viola sororia</i>	5	Yes	FAC		
2. <i>Solidago canadensis</i>	10	Yes	FACU		
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
50% = 7.5, 20% = 3			15	= Total Cover	
<i>Woody Vine Stratum:</i> (Plot Size: 15 feet )					
1.					
2.					
3.					
4.					
5.					
6.					
7.					
			= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.)					





**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Mahar Property City/County: Monroe County Sampling Date: 10/07/11  
 Applicant/Owner: Waste Management of New York, LLC State: New York Sampling Point: D-6 Wet  
 Investigator(s): Johanna E. Duffy, Barton & Loguidice, PC Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave  
 Slope (%): 0-2% Lat: 43° 2' 40.786" N Long: 77° 55' 34.813" W Datum: UTM NAD 83  
 Soil Map Unit Name: Churchville Silt Loam, 0-2% slopes NWI classification: PSS1

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____		If yes, optional Wetland Site ID: <u>Wetland D</u>

Remarks: (Explain alternative procedures here or in a separate report.)

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
<input checked="" type="checkbox"/> Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): 0  
 Water Table Present Yes \_\_\_\_\_ No  Depth (inches): >12.0  
 Saturation Present Yes  No \_\_\_\_\_ Depth (inches): 0 - surface **Wetland Hydrology Present?** Yes  No \_\_\_\_\_  
 (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 Aerial photo review completed prior to site investigation

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: D6-Wet

<i>Tree Stratum</i> (Plot Size: 30 feet )				Absolute % Cover	Dominant Species?	Indicator Status		
1.	<i>Fraxinus pennsylvanica</i>	10	Yes	FACW	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)			
2.								
3.								
4.								
5.								
6.								
7.								
50% = 5, 20% = 2		10	= Total Cover				<b>Prevalence Index Worksheet:</b> 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 = _____	
<i>Sapling/Shrub Stratum</i> (Plot Size: 15 feet )				Absolute % Cover	Dominant Species?	Indicator Status		
1.	<i>Fraxinus pennsylvanica</i>	5	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> - Rapid Test for Hydrophytic Vegetation X Dominance Test is >50% Prevalence Index is <=3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.			
2.	<i>Cornus amomum</i>	20	Yes	FACW				
3.								
4.								
5.								
6.								
7.								
50% = 12.5, 20% = 5		25	= Total Cover				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.  <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No    _____	
<i>Herb Stratum</i> (Plot Size: 5 feet )				Absolute % Cover	Dominant Species?	Indicator Status		
1.	<i>Doellingeria umbellata</i>	15	Yes	FACW	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No    _____			
2.	<i>Euthamia graminifolia</i>	20	Yes	FAC				
3.	<i>Carex crinita</i>	5	No	OBL				
4.	<i>Mentha x piperita</i>	5	No	FACW				
5.	<i>Eutrochium maculatum</i>	2	No	FACW				
6.	<i>Lycopus americanus</i>	2	No	OBL				
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
50% = 24.5, 20% = 9.8		49	= Total Cover		<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No    _____			
<i>Woody Vine Stratum:</i> (Plot Size: 15 feet )				Absolute % Cover			Dominant Species?	Indicator Status
1.	<i>Vitis riparia</i>	2	Yes	FACW			<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No    _____	
2.								
3.								
4.								
5.								
6.								
7.								
50% = 1, 20% = 0.4		2	= Total Cover		Remarks: (Include photo numbers here or on a separate sheet.)  Photos 1 - 7			



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Mahar Property City/County: Monroe County Sampling Date: 10/07/11  
 Applicant/Owner: Waste Management of New York, LLC State: New York Sampling Point: D-6 Upl  
 Investigator(s): Johanna E. Duffy, Barton & Loguidice, PC Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave  
 Slope (%): 0-2% Lat: 43° 2' 40.934" N Long: 77° 55' 34.772" W Datum: UTM NAD 83  
 Soil Map Unit Name: Churchville Silt Loam, 0-2% slopes NWI classification: \_\_\_\_\_

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes _____ No _____	X
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____			
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	If yes, optional Wetland Site ID: _____		

Remarks: (Explain alternative procedures here or in a separate report.)

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	_____ Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): 0  
 Water Table Present Yes \_\_\_\_\_ No  Depth (inches): >12.0  
 Saturation Present Yes \_\_\_\_\_ No  Depth (inches): >12.0 **Wetland Hydrology Present?** Yes \_\_\_\_\_ No   
 (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 Aerial photo review completed prior to site investigation

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: D6-Upl

Tree Stratum (Plot Size: 30 feet )	Absolute % Cover	Dominant Species?	Indicator Status				
1. <i>Fraxinus pennsylvanica</i>	5	Yes	FACW	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.8 (80%)</u> (A/B)			
2.							
3.							
4.							
5.							
6.							
7.							
50% = 2.5, 20% = 1	5	= Total Cover				<b>Prevalence Index Worksheet:</b> 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 = _____	
Sapling/Shrub Stratum (Plot Size: 15 feet )							
1. <i>Fraxinus pennsylvanica</i>	10	No	FACW				
2. <i>Cornus racemosa</i>	45	Yes	FAC				
3.							
4.							
5.							
6.							
50% = 27.5, 20% = 11	55	= Total Cover					
Herb Stratum (Plot Size: 5 feet )							
1. <i>Doellingeria umbellata</i>	15	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> - Rapid Test for Hydrophytic Vegetation X Dominance Test is >50% Prevalence Index is <=3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.			
2. <i>Solidago canadensis</i>	5	Yes	FACU				
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
50% = 10, 20% = 4	20	= Total Cover					
Woody Vine Stratum: (Plot Size: 15 feet )							
1. <i>Vitis riparia</i>	3	Yes	FACW	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.			
2.							
3.							
4.							
5.							
6.							
7.							
50% = 1.5, 20% = 0.6	3	= Total Cover					
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No    _____			



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Mahar Property City/County: Monroe County Sampling Date: 10/04/11  
 Applicant/Owner: Waste Management of New York, LLC State: New York Sampling Point: E-1 Wet  
 Investigator(s): Johanna E. Duffy, Barton & Loguidice, PC Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave  
 Slope (%): 0-2% Lat: 43° 2' 34.325" N Long: 77° 56' 6.675" W Datum: UTM NAD 83  
 Soil Map Unit Name: Sun loam, moderately shallow variant NWI classification: PFO1

Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____		

Remarks: (Explain alternative procedures here or in a separate report.)

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		_____ Surface Soil Cracks (B6)
_____ Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	_____ Drainage Patterns (B10)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Moss Trim Lines (B16)
_____ Saturation (A3)	_____ Marl Deposits (B15)	_____ Dry-Season Water Table (C2)
<input checked="" type="checkbox"/> Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots (C3)	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ Shallow Aquitard (D3)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Other (Explain in Remarks)	_____ Microtopographic Relief (D4)
_____ Sparsely Vegetated Concave Surface (B8)		_____ FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): 0  
 Water Table Present Yes \_\_\_\_\_ No  Depth (inches): >12.0  
 Saturation Present Yes \_\_\_\_\_ No  Depth (inches): >12.0 **Wetland Hydrology Present?** Yes  No \_\_\_\_\_  
 (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 Aerial photo review completed prior to site investigation

Remarks:  
 Inundation observed at wetland but not within limits of data plot

**VEGETATION** – Use scientific names of plants.

Sampling Point: E1-Wet

<i>Tree Stratum</i> (Plot Size: 30 feet )	Absolute % Cover	Dominant Species?	Indicator Status		
1. <i>Acer saccharinum</i>	35		FACW	<b>Dominance Test Worksheet:</b> 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)	
2. <i>Fraxinus pennsylvanica</i>	10		FACW		
3.					
4.					
5.					
6.					
7.					
	45	= Total Cover		<b>Prevalence Index Worksheet:</b> 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 = _____	
<i>Sapling/Shrub Stratum</i> (Plot Size: feet )					
1.					
2.					
3.					
4.					
5.					
6.					
7.					
		= Total Cover			
<i>Herb Stratum</i> (Plot Size: 5 feet )				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation _____ Dominance Test is >50% _____ Prevalence Index is <=3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
		= Total Cover			
<i>Woody Vine Stratum:</i> (Plot Size: 15 feet )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
1.					
2.					
3.					
4.					
5.					
6.					
7.					
		= Total Cover		<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No    _____	
Remarks: (Include photo numbers here or on a separate sheet.)  Photo 12					





**Appendix B**  
**Site Photographs**

*Mill Seat Landfill - Mahar Property - Wetland Field Delineation  
Site Photographs - October 2011*



Photo 1: Facing south, looking into Wetland D.



Photo 2: Photo looking west along corn field and Wetland D on left.



Photo 3: Facing south into Wetland D - forested coverytype.



Photo 4: Facing northeast, south area of Wetland D is shown.

*Mill Seat Landfill - Mahar Property - Wetland Field Delineation  
Site Photographs - October 2011*



Photo 5: Facing northwest and looking into Wetland D.



Photo 6: Facing west near scrub-shrub transition area of Wetland D.



Photo 7: Looking northeast at Wetland D spur (west edge) in alfalfa field.



Photo 8: Facing west along Bovee Road, Wetland A on left.

*Mill Seat Landfill - Mahar Property - Wetland Field Delineation  
Site Photographs - October 2011*



Photo 9: Portion of Wetland A shown facing south from Bovee Road.



Photo 10: Looking at middle of Wetland B- signs of seasonal inundation.



Photo 11: Picture showing Wetland C - located in center of wetland.



Photo 12: Facing northwest within Wetland E - seasonally inundated.

*Mill Seat Landfill - Mahar Property - Wetland Field Delineation  
Site Photographs - October 2011*



Photo 13: Facing east, access location between two ag fields.



Photo 14: View southwest across alfalfa field.



Photo 15: Showing wooded hillside along south edge of property.



Photo 16: South area of property - upland forest.

Addendum to Wetland Monitoring & Assessment Baseline Report  
**NATURAL RESOURCES INVENTORY** *of the*  
Mill Seat Property

~  
Monroe County, New York

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*September, 2012*



Addendum to Wetland Monitoring & Assessment Baseline Report  
NATURAL RESOURCES INVENTORY *of the*  
Mill Seat Property

~  
Monroe County, New York

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September 24, 2012



## TABLE OF CONTENTS

Introduction .....	1
Methods.....	1
Results.....	2
Site Conditions.....	2
Physiography & Native Vegetation .....	2
Relief & Drainage.....	2
Endangered Resources .....	2
Wildlife Sightings.....	2
Natural Communities .....	3
Upland Plant Communities .....	3
Wetland Plant Communities .....	5
References .....	14
Figure :	
Figure 1. Existing Plant Community Map.....	15
Tables:	
Table 1. Plant Species in Palustrine Emergent/Shrub Scrub Community & Western Forested Wetland.....	16
Table 2. Plant Species Observed in Shrub land/Tree line Community.....	17
Table 3. Plant Species Observed in Forested Wetland .....	18
Table 4. Plant Species Observed in Eastern Forested Wetland.....	18

Cover photographs: Top left - young red maple hardwood swamp; bottom right - flooded red maple hardwood swamp.

## INTRODUCTION

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In April, and May 2012, Applied Ecological Services, Inc. and Barton & Loguidice conducted a field visit to collect data on the Natural Resources in portions of the Mill Seat Landfill property. The purpose of this inventory was to provide additional ecological information to become the basis for potential future land use decisions for portions of Mill Seat's property. The information includes a summary of the physiographic and natural community elements

Portions of the Mill Seat Property have conservation value, in spite of the extent of agricultural land use on the property. A sizable portion of the Mill Seat property contains hydric soils and remnant native wetland plant communities, as well as mesic forest uplands containing spring ephemeral populations. The following report presents the results of our inventory, including a description of the natural community remnants and other land cover types.

## METHODS

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### *Information Search and Review*

A search and review of available resource data and documentation pertaining to natural resources and land uses on the Mill Seat was performed. Available materials included recent digital ortho-photography, property boundary survey, Monroe County Soil Survey, Natural Heritage Inventory endangered resource database, NWI and NYSDEC wetland maps, and recent wetland delineations (B&L 2009, 2011).

### *Land Cover Classification & Mapping*

A base map of the project area was developed using a color aerial photograph, with property boundaries. Prior to field investigation, a preliminary in-house review was conducted of previous vegetation and land cover type mapping by Barton & Loguidice 2011. A land cover type map (Figure 1) was produced that used a similar color-coded Land Classification mapping system to what had been developed previously by Barton & Loguidice (2009, 2011).

### *Field Reconnaissance*

On April 25 and May 15, 2012, AES and B&L conducted a ground reconnaissance of the Mill Seat property. Natural Plant communities were identified/confirmed and mapped and plant species in each community recorded. Occasional animal sightings and signs were documented as were site disturbances and general ecological health conditions of the various vegetation communities. Representative conditions of vegetation communities identified during the survey were photo documented.

## RESULTS

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### Site Conditions

The Mill Seat Landfill Property was largely comprised of existing landfill operations land and agricultural land (Figure 1). Most agricultural fields have typically been planted to row crops. Most fields were in an unplanted condition at the time of our site visits. Upland tree lines, woodlands and wetlands, mostly which are forested were also found in the Mill Seat Property. An old farmstead occupied a small portion of the property.

Existing delineated wetlands were found in most areas that contained hydric soil. The west, south and east sides of the property investigated in this study consisted mostly of wetlands, some of which were along portions of Hotel Creek.

### Physiography & Native Vegetation

The Mill Seat Property was level to gently rolling (0-6% slopes), with some steep slopes ranging from 25-60% (see soils map in B&L 2011). A constructed ditch drained a portion of a wooded wetland in the central area of the Mill Seat Property investigated without flow directed south to Hotel Creek.

### Soils

Soil types of the Mill Seat Property have previously been described and mapped in B&L (2011). Upland soils consisted largely of well-drained loams and silt loams over glacial tills. Soils of low-lying areas consisted of hydric soils comprised of Brockport silty clay loam, Lakemont silt loam, shallow Muck and Wayland silt loam. Churchill silt loam, an upland soil, typically contained hydric inclusions.

### Endangered Resources

NYSDEC's Natural Heritage Program data files of recent and historical records in the project area listed two species that potentially could occur on the Mill Seat Property (B & L 2011). These were the federally threatened and NY State endangered bog turtle (*Clemmys muhlenbergii*) and the NY State endangered log fern (*Dryopteris celsa*). There were also several Exploitably Vulnerable plant species that potentially could be found on the Mill Seat Property.

### Wildlife Sightings

Wildlife encountered during the site visit was comprised of bird species, utilizing the site or flying over. Commonly seen and heard songbirds included those of open and brushy agricultural lands, such as robin, cardinal, turkey vulture, red winged blackbird, song sparrow and field sparrow. In the woodlands, flickers and downy woodpeckers were observed or heard.

### Natural Communities

A general description of the natural communities and other land cover types identified on the Mill

Seat Property follows. The approximate extent of each community is delineated on the map in Figure 1, the Existing Conditions Map. Our investigations were conducted in the early part of the growing season, but most of the vegetation had emerged from dormancy.

## UPLAND PLANT COMMUNITIES

### Agricultural Fields & Meadows

Agricultural fields and meadows comprised approximately 150 acres of the Mill Seat Property (Figure 1). Upland meadows were comprised mostly of non-native cool season grasses, non-native agricultural weeds and a few non-conservative native upland species.

### Deciduous Forests

Small areas of upland mesic deciduous forest areas were found on the property. These were sugar maple dominated woodlands with a moderate level of spring wildflowers. Typical native species included sugar maple (*Acer saccharum*), ironwood (*Ostrya virginiana*), white ash (*Fraxinus americana*), woodbine (*Parthenocissus quinquefolia*), yellow trout lily (*Erythronium americanum*), wild leek (*Allium tricoccum*), wild geranium (*Geranium maculatum*), jack-in-the-pulpit (*Arisaema triphyllum*), seer sucker sedge (*Carex plantaginea*), and enchanter's nightshade (*Circaea lutetiana*). Other occasionally observed species were wild black cherry (*Prunus serotina*), shagbark hickory (*Carya ovata*), pin cherry (*Prunus pennsylvanica*), sedges (*Carex* spp.), prickly ash (*Zanthoxylum americana*), red oak (*Quercus rubra*), white rattlesnake-root (*Prenanthes alba*), kidney leaf buttercup (*Ranunculus abortivus*), blue cohosh (*Caulophyllum thalictroides*), violets (*Viola* spp.), zig-zag goldenrod (*Solidago flexicaulis*), white snake root (*Eupatorium rugosum*), false Solomon's seal (*Smilacina racemosa*), white trillium (*Trillium grandiflorum*), Christmas fern (*Polystichum acrostichoides*) and horsetail (*Equisetum arvense*). Two species, white trillium and Christmas fern are listed in NY State as Exploitably Vulnerable species.

### Shrub Land and Treeline

Upland shrub lands and treelines were found south of the existing Landfill Operations Areas (Figure 1). Tree lines provided the borders of most of the agricultural fields and some of the upland border of the wetlands. This community type has been disturbed for years as a result of the adjacent agricultural activities. Most tree lines have had field stones from the nearby agricultural fields placed in them. Most of this community was comprised of narrow bands of trees and shrubs and thus contained a variety of native woody (Photographs 1, 2, & 3) and herbaceous species typically associated with upland forests as well as a number of native and non-native weedy species. Typical native species included yellow trout lily, prickly ash, white avens (*Geum canadense*), heal all (*Prunella vulgaris*), poison ivy (*Rhus radicans*), ash (*Fraxinus* sp.), Pennsylvania bitter cress (*Cardamine pennsylvanica*), sedge (*Carex* sp.), American hazelnut (*Corylus americana*), shagbark hickory, pin cherry, red maple, bloodroot (*Sanguinaria canadensis*), Canada goldenrod (*Solidago canadensis*), farewell summer aster (*Symphotrichum lateriflorum*), raspberry (*Rubus idaeus*), wild black currant (*Ribes americana*), woodbine, woodland knotweed (*Polygonum virginianum*), gray dogwood (*Cornus racemosa*), rose's sedge (*Carex rosea*), bur oak (*Quercus macrocarpa*), ash (*Fraxinus* sp.), Violet (*Viola* sp.), choke cherry (*Prunus virginiana*), wild black cherry, horsetail, bedstraw (*Galium* sp.), strawberry (*Fragaria virginiana*), planted black walnut (*Juglans nigra*) and black raspberry (*Rubus occidentalis*). One species found in this community; bloodroot, is listed as a NY State Exploitably Vulnerable species.

Non-native herbaceous and woody species were also commonly observed in this disturbed wooded community. These included garlic mustard (*Alliaria petiolata*), burdock (*Arctium minus*), multiflora rose (*Rosa multiflora*), European buckthorn (*Rhamnus cathartica*), honeysuckle (*Lonicera* spp.), reed canary grass (*Phalaris arundinacea*), dandelion (*Taraxacum officinale*), climbing nightshade (*Solanum dulcamara*), hawthorns (*Crataegus* spp.), teasel (*Dipsacus* sp.), curly dock (*Rumex crispus*), black locust (*Robinia pseudoacacia*), and planted apples (*Malus* sp.).



Photograph 1. Shagbark hickory in the shrub land/treeline community.



Photograph 2. Young trees & shrubs in the shrub land and treeline community.



Photograph 3. Shrub land/treeline community.

## WETLAND PLANT COMMUNITIES

Wetland areas investigated in 2012 in the Mill Seat Property were dominated by forested wetlands with a sizable acreage of Palustrine Emergent/Shrub Scrub Mix wetlands and a small constructed pond (Figure 1).

### Forested Wetlands

Forested wetlands were found mostly on the east and west sides of the Mill Seat Property with a small area also found to the south along Hotel Creek (Figure 1). Other than Landfill Operations areas, forested wetlands comprised the largest acreage of vegetation communities on the Mill Seat Property investigated, approximately 136 acres. A smaller sized forested wetland of approximately 12 acres (RG-6) was also investigated in the central area of the property just south of the current landfill foot print (Figure 1). This wetland was actively being drained by a constructed ditch that was located to the south of this wetland and eventually connected to the eastern wetland complex and then to Hotel Creek.

### Western and Southern Forested Wetlands (RG-5)

The wetlands along the western side of the Mill Seat Property (Photographs 4-7) were mostly comprised of forested wetlands consisting of red maple (*Acer rubrum*) and green ash (*Fraxinus pensylvanica*). Within these forested areas were small patches of the Palustrine Emergent/Shrub scrub wetlands. The vegetation in forested wetland on the west side was moderately diverse and moderate to high quality. Evidence of past logging (dead cut stumps of varying age) was observed in most of the forested wetland areas.

Some of the plant species observed in the western and southern forested wetland communities included red maple, green ash, sensitive fern (*Onoclea sensibilis*), farewell summer aster, fowl manna grass (*Glyceria striata*), bulbous bitter cress (*Cardamine bulbosa*), awl-fruited sedge (*Carex stipata*), spicebush (*Lindera benzoin*), blue beech (*Carpinus caroliniana*), starry Solomon's seal (*Smilacina stellata*), marsh marigold (*Caltha palustris*), black willow (*Salix nigra*), wild iris (*Iris versicolor*), poison ivy, wood reed (*Cinna arundinacea*), hog peanut (*Amphicarpaea bracteata*), tufted yellow-loosestrife (*Lysimachia*

*thyrsiflora*), hemlock water parsnip (*Sium suave*), turtles head (*Chelone glabra*), bishop's cap (*Mitella diphylla*) and jewelweed (*Impatiens capensis*). One species; turtles head is listed as a NY State Exploitably Vulnerable species.



Photograph 4. Flooded red maple hardwood swamp.



Photograph 5. Young red maple hardwood swamp with shrubs.



Photograph 6. Forested red maple hardwood swamp with patches of open wetlands.



Photograph 7. Young forested red maple hardwood swamp.

#### Eastern Forested Wetland (RG-7)

The forested wetland area located to the south and east on the Mill Seat Property was dominated by red maple and also contained green (and perhaps some black ash; *Fraxinus nigra*) trees (Photograph 8). Native plant species diversity was moderately high and the quality moderate to high (Photograph 9). Native plant species included; red maple, green ash, farewell summer aster, wild black currant, wild grape (*Vitis riparia*), bristly buttercup (*Ranunculus hispidus*), virgin's bower (*Clematis virginiana*), lake bank sedge (*Carex lacustris*), fowl manna grass, violet (*Viola* sp.), awl-fruited sedge, false nettle, Joe pye weed (*Eupatorium maculatum*), wood reed grass, wild iris, water horehound (*Lycopus americana*), marsh marigold, spicebush, red osier dogwood, sensitive fern and cattail (*Typha* spp.). One species; believed to be Canada lily (*Lilium canadense*) was also found in the southern area adjacent to Hotel Creek just inside the treeline of this community. Canada lily is listed as a NY State Exploitably



Vulnerable species. The lily plant specimens located were immature and there was a possibility that some of these individuals could have been the NY State endangered Michigan lily (*Lilium michiganense*) or the Exploitably Vulnerable turk's cap lily (*Lilium superbum*). Identification during flowering may be required.

The forested wetland tree canopy was most likely second or third growth, based on tree diameters, with most trees less than 18 inches DBH (Photographs 10 & 11). The sub canopy of woody species ranged from almost an open sub canopy to areas where dense spicebush was found. Downed woody material cover, which provides habitat and nutrient recycling, was moderate. In more open patches, the non-native aggressive reed canary grass was observed.



Photograph 8. Young to moderate of forested wetland along the eastern portions of the Mill Seat Property.



Photograph 9. Marsh marigold and a variety of plant species in the southern portion of the forested wetland along Hotel Creek.



Photograph 10. Second or third growth forested red maple hardwood swamp.



Photograph 11. Spice bush in understory of forested red maple hardwood swamp.

#### Central Forested Wetland, (RG-6)

This forested wetland community was being actively drained by a constructed ditch. In April, most of the interior woods were inundated with up to 6 inches of water (or more in a few areas). The woods were dominated by red maple, especially in the woodland interior with scattered silver maples (*Acer saccharinum*), green ash and swamp white oaks (*Quercus bicolor*). Red maples were mostly smaller sized (4-12" DBH) and the swamp white oaks were typically larger (8-14" DBH). A few larger red maples were observed and tended to be raised on hummocks above the standing water (Photographs 12, 13, & 14). Overall, most trees appeared to have very shallow roots, as a number of trees had blown down.



Photograph 12. Central forested wetland (RG-6).



Photograph 13. Downed wood in central forested wetland (RG-6).



Photograph 14. Forested wetland with downed wood (RG-6).

An abundance of red maple and ash seedlings had germinated and were the dominant vegetation in the deeper water areas of this central wetland (Photographs 13 & 14). While diversity was moderate, the percentage of ground cover of the native vegetation in this central wetland appeared to be much less than the other forested wetland areas on the east, south and west on the Mill Seat Property. Some of the native species observed included red maple, silver maple, green ash, swamp white oak, red osier dogwood, buttonbush (*Cephalanthus occidentalis*), sedges (*Carex* spp.), false nettle, fowl manna grass, farewell summer aster, sensitive fern, black raspberry, hop sedge, wild iris, awl-fruited sedge, water horehound, white avens, cattail, cursed buttercup (*Ranunculus sceleratus*), wool grass (*Scirpus cyperinus*) and dark green bulrush (*Scirpus atrovirens*).

Towards the edge of this area, non-native grasses of reed canary grass (Photograph 15) and giant reed grass (*Phragmites australis*) had gained a foothold. In drier areas of the periphery of this woodland, non-native woody species of European buckthorn, multiflora rose and honeysuckle have also invaded as have some non-native herbaceous species; dandelion and climbing nightshade.



Photograph 15. Reed canary grass (foreground) and giant reed canary grass (background) in the central forested wetland (RG-6).

#### Palustrine Emergent/Shrub Scrub Mix (parts of RG-5 & 7)

This plant community was found in patches throughout the wetlands around the Mill Seat Landfill, with a more expansive area along Hotel Creek to the south (Figure 1). Trees were smaller sized and usually spaced along the outer edge of the patch with some areas having dense shrubs or dense sedges with few to no trees (Photographs 16-18). This community comprised more than 58 acres of the areas investigated (Figure 1). The Palustrine Emergent/Shrub Scrub mix contained a diverse mix of herbaceous and woody species. The herbaceous species included, lake bank sedge, horsetail, sensitive fern, wild iris, marsh marigold, fowl manna grass, farewell summer aster, fringed loosestrife (*Lysimachia ciliata*), violet (*Viola* sp.), cardinal flower (*Lobelia cardinalis*), tussock sedge (*Carex stricta*), awl-fruited sedge, turtles head, red stemmed aster (*Symphotrichum puniceum*), jewelweed, cattail, Joe-pye weed, cinnamon fern (*Osmunda cinnamomea*), royal fern (*Osmunda regalis*), poison ivy, cattail, hemlock water parsnip, boneset (*Eupatorium perfoliatum*), graceful sedge (*Carex gracillima*), hop sedge, poison hemlock (*Cicuta maculata*), and buttercups (*Ranunculus* spp.). Cardinal flower and turtles head are listed as State of NY Exploitably Vulnerable species. Woody plant species included, ashes, wild black currant, red osier dogwood, red maple, gray dogwood, silky dogwood (*Cornus amomum*), willows (*Salix* spp.), buttonbush, blue beech, swamp white oak and nanny berry (*Viburnum lentago*).

Both non-native herbaceous and woody species were observed in this community or in adjacent habitats, most likely a result of an increase in light availability. Reed canary grass, dandelion, climbing nightshade, honeysuckles, European buckthorn and high bush cranberry (*Viburnum opulus*) were the most commonly observed non-native species in this community.



Photograph 16. Palustrine emergent/shrub scrub area along Hotel Creek.



Photograph 17. Dense shrub in the palustrine emergent/shrub scrub community.



Photograph 18. Sedge dominated open areas of palustrine emergent/shrub scrub community.

## Open Water/Pond

A small constructed pond/open water area was located on the western side of the Mill Seat Property in wetland RG-5 (Figure 1). The pond appeared to be an acre in size or slightly larger. The pond depth was not determined, but appeared of sufficient depth to perhaps support a limited fishery and a variety of amphibians. The pond edge was vegetated with mostly native species and localized populations of non-native reed grass. Native species included wild iris, lakebank sedge, buttonbush and sensitive fern.

## References

Barton & Loguidice. 2009. Wetland Delineation Report for the Proposed Mill Seat Landfill Soil Expansion Area. Prepared for: Waste Management of New York, Inc. Monroe County, New York.

Barton & Loguidice. 2011. Wetland Monitoring and Assessment Baseline Report & 2011 Annual Report. Prepared for Waste Management of New York, LLC; Monroe County Mill Seat Landfill, Town of Riga, New York.

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Figure 1. Existing Plant Community Map

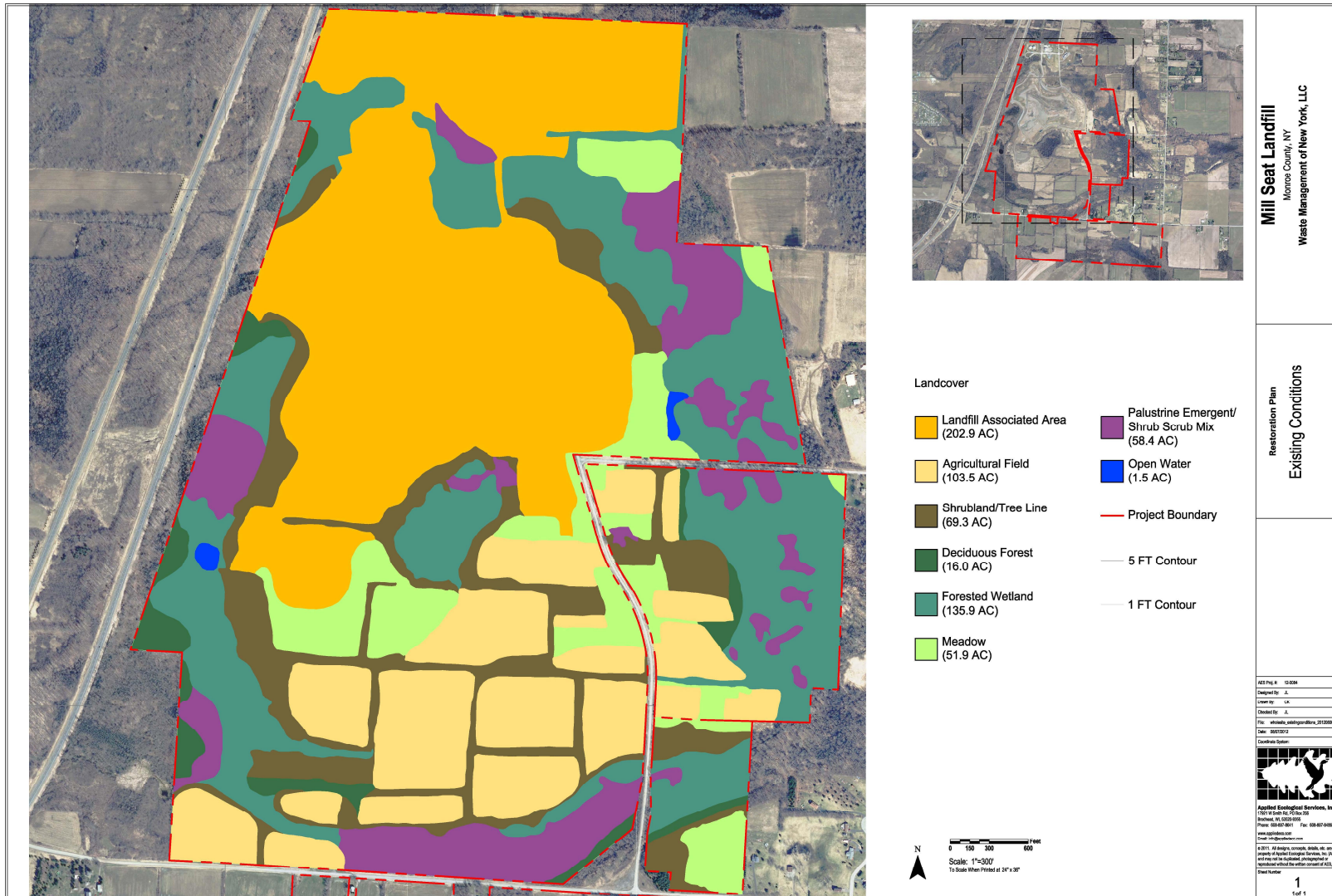




Table 1. Plant species observed in Palustrine Emergent/Shrub Scrub Community and Western Forested Wetland (DEC RG-5)

<i>Scientific Name</i>	Common Name
<i>Acer rubrum</i>	Red maple
<i>Acer saccharinum</i>	Silver maple
<i>Agrimonia gryposepala</i>	Tall agrimony
<i>Alliaria petiolata</i>	Garlic mustard
<i>Arctium minus</i>	Common burdock
<i>Asclepias incarnate</i>	Swamp milkweed
<i>Aster lateriflorus</i>	Side-flowering aster
<i>Caltha palustris</i>	Marsh marigold
<i>Cardamine pensylvanica</i>	Pennsylvania bitter cress
<i>Carex lacustris</i>	Lake sedge
<i>Carex stipata</i>	Awl-fruited sedge
<i>Chelone glabra</i>	Turtlehead
<i>Cicuta maculate</i>	Water hemlock
<i>Cornus stolonifera</i>	Red- osier dogwood
<i>Crataegus mollis</i>	Downy hawthorn
<i>Crataegus sp.</i>	Hawthorn
<i>Dryopteris sp.</i>	Shield fern
<i>Epilobium coloratum</i>	Cinnamon willow herb
<i>Equisetum arvense</i>	Horsetail
<i>Erythronium americanum</i>	Yellow trout lily
<i>Euphorbia maculate</i>	Nodding spurge
<i>Fragaria virginiana</i>	Wild strawberry
<i>Fraxinus pennsylvanica subintegerrima</i>	Green ash
<i>Galium obtusum</i>	Wild madder
<i>Geum canadense</i>	White avens
<i>Glyceria striata</i>	Fowl manna grass
<i>Impatiens capensis</i>	Spotted touch-me-not
<i>Iris virginica shrevei</i>	Blue flag iris
<i>Lilium michiganense</i>	Michigan lily
<i>Lobelia cardinalis</i>	Cardinal flower
<i>Lonicera tatarica</i>	Tartarian honeysuckle
<i>Lysimachia ciliate</i>	Fringed loosestrife
<i>Lythrum salicaria</i>	Purple loosestrife
<i>Mentha arvensis villosa</i>	Wild mint
<i>Onoclea sensibilis</i>	Sensitive fern
<i>Populus deltoids</i>	Cottonwood
<i>Prunella vulgaris</i>	Common self heal
<i>Prunus pensylvanica</i>	Pin cherry
<i>Prunus virginiana</i>	Choke cherry
<i>Rhamnus cathartica</i>	Buckthorn
<i>Ribes americanum</i>	Wild black currant
<i>Rosa palustris</i>	Swamp rose
<i>Salix nigra</i>	Black willow
<i>Sium suave</i>	Water parsnip
<i>Smilacina racemosa</i>	Feathery false Solomon's seal

<i>Solanum dulcamara</i>	Bittersweet nightshade
<i>Typha latifolia</i>	Cattail
<i>Viburnum opulus</i>	European highbush cranberry
<i>Viola cucullata</i>	Hooded violet
<i>Xanthoxylum americanum</i>	Prickly ash

Table 2. Plant Species Observed in Shrubland/Treeline Community

<i>Scientific Name</i>	Common Name
<i>Acer rubrum</i>	Red maple
<i>Alliaria petiolata</i>	Garlic mustard
<i>Allium sp.</i>	Onion species
<i>Aster lateriflorus</i>	Side-flowering aster
<i>Carex rosea</i>	Curly-styled wood sedge
<i>Carya ovate</i>	Shagbark hickory
<i>Cornus racemosa</i>	Gray dogwood
<i>Crataegus mollis</i>	Downy hawthorn
<i>Fraxinus nigra</i>	Black ash
<i>Fraxinus pennsylvanica subintegerrima</i>	Green ash
<i>Geum canadense</i>	White avens
<i>Glyceria striata</i>	Fowl manna grass
<i>Lonicera tatarica</i>	Tartarian honeysuckle
<i>Onoclea sensibilis</i>	Sensitive fern
<i>Parthenocissus quinquefolia</i>	Virginia creeper
<i>Polygonum virginianum</i>	Woodland knotweed
<i>Prunus pensylvanica</i>	Pin cherry
<i>Prunus virginiana</i>	Choke cherry
<i>Quercus bicolor</i>	Swamp white oak
<i>Quercus macrocarpa</i>	Bur oak
<i>Ranunculus abortivus</i>	Small-flowered buttercup
<i>Rhamnus cathartica</i>	Buckthorn
<i>Rhus radicans</i>	Poison ivy
<i>Ribes americanum</i>	Wild black currant
<i>Rosa multiflora</i>	Multiflora rose
<i>Rubus occidentalis</i>	Black raspberry
<i>Sanguinaria Canadensis</i>	Bloodroot
<i>Taraxacum officinale</i>	Dandelion
<i>Viburnum rafinesquianum</i>	Downy arrow wood
<i>Vitis riparia</i>	Riverbank grape

Table 3. Plant Species Observed in Forested Wetlands (Central Forested Wetland DEC RG-6)

Scientific Name	Common Name
<i>Acer rubrum</i>	Red maple
<i>Acer saccharinum</i>	Silver maple
<i>Alliaria petiolata</i>	Garlic mustard
<i>Aster lateriflorus</i>	Side-flowering aster
<i>Boehmeria cylindrical</i>	False nettle
<i>Carex stipata</i>	Awl-fruited sedge
<i>Cornus stolonifera</i>	Red-osier dogwood
<i>Erigeron philadelphicus</i>	Marsh fleabane
<i>Eupatorium perfoliatum</i>	Boneset
<i>Fragaria virginiana</i>	Wild strawberry
<i>Fraxinus pennsylvanica subintegerrima</i>	Green ash
<i>Geum canadense</i>	Wood avens
<i>Iris virginica shrevei</i>	Blue flag iris
<i>Juncus effuses</i>	Common rush
<i>Lonicera tatarica</i>	Tartarian honeysuckle
<i>Lycopus rubellus</i>	Stalked water horehound
<i>Phalaris arundinacea</i>	Reed canary grass
<i>Phragmites australis</i>	Reed
<i>Quercus bicolor</i>	Swamp white oak
<i>Rhamnus cathartica</i>	Buckthorn
<i>Rhus radicans</i>	Poison ivy
<i>Rosa palustris</i>	Swamp rose
<i>Rubus occidentalis</i>	Black raspberry
<i>Rubus occidentalis</i>	Black raspberry
<i>Scirpus fluviatilis</i>	River bulrush
<i>Solanum dulcamara</i>	Bittersweet nightshade
<i>Taraxacum officinale</i>	Dandelion

Table 4. Plant Species Observed in the Eastern Forested Wetlands (DEC RG-7)

Scientific Name	Common Name
<i>Acer rubrum</i>	Red maple
<i>Acer saccharinum</i>	Silver maple
<i>Agalinis sp.</i>	Foxglove species
<i>Alisma subcordatum</i>	Water plantain
<i>Alliaria petiolata</i>	Garlic mustard
<i>Allium sp.</i>	Onion species
<i>Asclepias incarnata</i>	Swamp milkweed
<i>Aster lateriflorus</i>	Side-flowering aster
<i>Aster puniceus</i>	Swamp aster
<i>Boehmeria cylindrical</i>	False nettle
<i>Carex lacustris</i>	Lake sedge
<i>Carex stipata</i>	Awl-fruited sedge
<i>Chelone glabra</i>	Turtlehead
<i>Cicuta maculate</i>	Water hemlock
<i>Cinna arundinacea</i>	Wood reed
<i>Circaea lutetiana canadensis</i>	Enchanter's nightshade

<i>Clematis virginiana</i>	Virgin's bower
<i>Cornus stolonifera</i>	Red-osier dogwood
<i>Dryopteris</i> sp.	Shield fern species
<i>Epilobium coloratum</i>	Cinnamon willow herb
<i>Equisetum arvense</i>	Horsetail
<i>Eupatorium maculatum</i>	Joe-pye weed
<i>Eupatorium perfoliatum</i>	Boneset
<i>Eupatorium rugosum</i>	White snakeroot
<i>Fraxinus nigra</i>	Black ash
<i>Fraxinus pennsylvanica subintegerrima</i>	Green ash
<i>Galium aparine</i>	Annual bedstraw
<i>Galium triflorum</i>	Sweet-scented bedstraw
<i>Geum canadense</i>	White avens
<i>Glyceria striata</i>	Fowl manna grass
<i>Impatiens capensis</i>	Spotted touch-me-not
<i>Iris virginica shrevei</i>	Blue flag iris
<i>Lemna minor</i>	Small duckweed
<i>Lindera benzoin</i>	Spicebush
<i>Ludwigia palustris americana</i>	Marsh purslane
<i>Lycopus americanus</i>	Water horehound
<i>Lycopus rubellus</i>	Stalked water horehound
<i>Matteuccia struthiopteris</i>	Ostrich-feather fern
<i>Mentha arvensis villosa</i>	Wild mint
<i>Mimulus ringens</i>	Monkey flower
<i>Onoclea sensibilis</i>	Sensitive fern
<i>Phragmites australis</i>	Reed
<i>Prunella virginiana</i>	Choke cherry
<i>Ranunculus sceleratus</i>	Cursed buttercup
<i>Ranunculus septentrionalis</i>	Swamp buttercup
<i>Rhamnus cathartica</i>	Buckthorn
<i>Rhus radicans</i>	Poison ivy
<i>Ribes americanum</i>	Wild black currant
<i>Rosa multiflora</i>	Multiflora rose
<i>Rubus occidentalis</i>	Black raspberry
<i>Salix nigra</i>	Black willow
<i>Sanguinaria canadensis</i>	Bloodroot
<i>Smilacina racemosa</i>	Feathery false Solomon's seal
<i>Solanum dulcamara</i>	Bittersweet nightshade
<i>Symphoricarpos orbiculatus</i>	Coralberry
<i>Taraxacum officinale</i>	Dandelion
<i>Typha latifolia</i>	Cattail
<i>Urtica procera</i>	Tall nettle
<i>Viburnum lentago</i>	Nannyberry
<i>Viburnum opulus</i>	European highbush cranberry
<i>Viburnum rafinesquianum</i>	Downy arrow wood
<i>Viola cucullata</i>	Hooded violet

**NATURAL RESOURCES INVENTORY *of the***  
**The Mahar Property**

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**Monroe County, New York**

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*August, 2012*



**NATURAL RESOURCES INVENTORY *of the***  
**The Mahar Property**

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**MONROE COUNTY, New York**

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## TABLE OF CONTENTS

Introduction .....	1
Methods .....	2
Results .....	3
Site Conditions .....	3
Natural Communities .....	3
Uplands .....	3
Agricultural Fields .....	3
Mesic Forest.....	3
Tree Lines .....	8
Young Woodlands.....	8
Shrub/Scrub Trees .....	9
Wetlands.....	14
Cattail Wetlands.....	14
Forested Wetlands .....	15
Shrub/Scrub Wetlands .....	18
Endangered Resources .....	20
Wildlife Sightings.....	20
Opportunities <i>for</i> Restoration & Management.....	21
References.....	21
Figure	
Figure 1. Existing Conditions Map.....	22
Exhibit	
Exhibit 1. Plant Community Species Lists.....	23

Cover Photographs: Top Photograph - Mesic Forest; bottom photograph- Forested Wetland on the Mahar Property, taken in spring, 2012

## INTRODUCTION

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In April 2012, Applied Ecological Services, Inc. conducted a Natural Resource Inventory on the 207-acre Mahar parcel. The Mahar Property is located south of the current Mill Seat landfill, along the south side of Bovee Road, Town of Riga, Monroe County, New York. The Mahar property is located in the southwest corner of Monroe County.

The purpose of this inventory effort is to provide valuable ecological information that will become the basis for future land use planning on this agricultural property. The information includes a summary of the physiographic and natural community elements, as well as identifies critical resource issues and opportunities to restore and manage native remnant wetland and upland communities on the site. These elements can serve as important links to local environmental corridors, as well as provide visual amenities in the developed landscape, potentially provide soil borrow opportunities and evaluate the site as wetland mitigation for Mill Seat Landfill expansion.

Portions of the Mahar property have conservation value, in spite of the extensive agricultural land uses on the property. A portion of the property contains hydric soils with remnant native wetland plant populations, as well as mesic forest upland, containing spring ephemeral native wildflower populations. Other forested wetlands and upland shrub scrub cover provides an opportunity to integrate a complex of wetland and upland habitat within a larger environmental corridor.

The results of the Natural Resource Inventory, including a description of the natural community remnants and other land cover types, as well as a discussion of critical resource issues and opportunities for restoration and management on the property follow.



## METHODS

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### *Information Search and Review*

AES conducted a brief review of available resource data and documentation pertaining to natural resources and land uses on the Mahar property. Available materials included recent aerial photography, topography, Monroe County Soil Survey, NWI and NYSDEC wetland maps, and recent wetland delineation (Barton & Loguidice 2011).

### *Physical Setting*

The Mahar property is located within the upper Genesee Basin and in the Great Lakes Plain (Zone B), Erie-Ontario Plain Ecological Zone of New York (NYSDEC 2008). Hotel Creek, a mapped by NYSDEC waterway is found north of the Mahar property across Bovee Road.

Past glaciations have influenced the Mahar Property. Three drumlins are found within the Mahar property. Over 100 feet of relief occurs on the Mahar property, with the highest point being 760 feet above sea level at the top of Pinnacle Hill one of the three drumlins located in the south central portion of the site and the lowest relief being 650 feet above sea level in the northeast portion of the site (Barton & Loguidice 2011).

Soils on the property have been previously described by Barton & Loguidice (2011). Approximately 60 acres are described as being somewhat to very poorly drained soils and 4 acres as being freshwater marsh with most of hydric soils currently supporting wetlands. The largest onsite wetland complex is found in the southeast corner of the Property (B&L 2011). Smaller wetlands are located in the southwestern portion of the property and a small wetland is located along Bovee road (see B&L 2011 for wetland locations). The NWI wetland map showed two wetland types: Palustrine Emergent and Palustrine Forested/Scrub-Shrub.

Upland soils consist of moderately well to well drained silt loams and loams. In addition, some sandy loams, cobbly loams and fine sandy loams are well drained soils associated mostly with the three onsite drumlins.

### *Land Cover Classification & Mapping*

A color aerial photograph was used to map the major vegetation and land cover types in the field. On April 26, AES conducted a ground reconnaissance of the Mahar property. AES identified and mapped the locations of natural community boundaries, recorded plant species representative of each identified plant community, recorded occasional animal sightings and signs, documented disturbances and general ecological health conditions on the property and identified restoration and management opportunities. Representative plant community conditions identified during the survey were photo documented.

## RESULTS

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### Site Conditions

The Mahar property consists of mostly agricultural land, with most fields typically planted to row crops or hay fields (Figure 1). Tree lines typically separate the individual crop fields. Upland woodlands consist of sugar maple and beech in the southeast and southwest corners. Scrub/shrub areas (former apple orchards) on the drumlins were found in higher contour zones while forested hardwood swamp and shrub/scrub wetlands were located on lower contours. Most row crop fields were in an unplanted condition at the time of our site visits. Hydric and or poorly drained soils comprised approximately 30% of the property. The south east side corner of the property consists of sizable forested and shrub/scrub wetland.

### Natural Communities

Following is a general description of the natural communities and other land cover types identified on the Mahar property. The extent of each community is delineated on the existing conditions map (Figure 1). Our investigations were conducted in the early part of the growing season (April), but most of the vegetation was well enough established to identify. Site photographs were also taken of representative plant communities.

### Uplands

*Agricultural Fields* (Land Cover Type 1, Figure 1) – Agricultural lands made up the majority of the Mahar Property and were comprised of row cropped fields and hay fields. Most row crop fields had not been planted at the time of our site visit.

*Mesic Forests* (Land Cover Type 8, Figure 1) – The southwest corner of the property contained a mature mesic upland forest community comprised of sugar maple (*Acer saccharum*) and beech (*Fagus grandiflora*). This mesic forest had a somewhat open understory with a beech and sugar maple saplings and small trees (Photographs 1-3) and scattered small trees and shrubs and can be described as typical healthy mesic forest. The sugar maple-beech community supported a diverse plant community comprised of trees, shrubs and wildflowers. The tree canopy was comprised of some differing of age classes of maple and beech with the sub canopy dominated by sugar maple and ironwood (*Ostrya virginiana*). Additional woody species included chokecherry (*Prunus virginiana*), pin cherry (*Prunus pensylvanica*), shagbark hickory (*Carya ovata*), red maple (*Acer rubrum*), bitternut hickory (*Carya cordiformis*), white ash (*Fraxinus Americana*), wild black cherry (*Prunus serotina*), ironwood, spicebush (*Lindera benzoin*), red elm (*Ulmus rubra*), red oak (*Quercus rubra*), basswood (*Tilia americana*), alternate leaved dogwood (*Cornus alternifolia*), gooseberry (*Ribes cynobasti*), red elderberry (*Sambucus pubens*), woodbine (*Parthenocissus quinquefolia*) and poison ivy (*Rhus radicans*).



**Photo 1. Sugar maple-beech mesic woods.**



**Photo 2. Sugar maple-beech mesic woods – note old cut stumps in foreground.**



**Photo 3. Sugar maple-beech mesic woods with numerous saplings of maple and beech.**

The ground story flora was mostly comprised of spring ephemerals and included sedges such as Pennsylvanica sedge, curly styled wood sedge, and plantain leaf sedge (*Carex pennsylvanica*, *C rosea*, and *C plantaginea*) onion (*Allium* sp.), wild leek (*Allium tricoccum*), yellow trout lily (*Erythronium americanum*), blue cohosh (*Caulophyllum thalictroides*), Virginia water leaf (*Hydrophyllum virginiana*), bloodroot (*Sanguinaria canadensis*), toothwort (*Dentaria laciniata*), large flowered trillium (*Trillium grandiflora*), bottle brush grass (*Elymus Hystrix*), violets (*Viola* spp.), false Solomon seal (*Smilacina racemosa*) red raspberry (*Rubus idaeus*), black raspberry (*Rubus occidentalis*), white snake root (*Eupatorium rugosum*), jack-in-the pulpit (*Arisaema triphyllum*), white avens (*Geum canadense*), moon seed (*Menispermum canadense*) (Photographs 4 & 5).

Some non-natives species were present, but their numbers were generally low. These included garlic mustard (*Alliaria petiolata*), dandelion (*Taraxacum officinale*), dame's rocket (*Hesperis matronalis*), lesser burdock (*Arctium minus*) and multiflora rose (*Rosa multiflora*). Anthropogenic activities included past logging which was evident from the number of old and variously decayed stumps. Placement of glacial rocks into fence walls that had been removed from the farm fields over the years was also common (Photograph 6).



**Photo 4. Mesic woods spring ephemerals: trilliums & broad leaved wild leek.**



**Photo 5. Spring ephemeral ground cover in mesic woods.**



**Photo 6. Stone fence built from glacial material collected from farm fields.**

A second mesic woodland area was located in the southeastern portion of the Mahar Property (Figure 1). This woodland was also dominated by sugar maple and beech with some red maples (Photograph 7). The larger sugar maple comprised a somewhat even-aged stand. Evidence of past logging activities was found throughout this area. Beech drops (*Epifagus virginiana*), an uncommon saprophyte on beech roots were found in this mesic woods. Occasionally, white ash, pin cherry, wild black cherry, ironwood, spice bush, woodbine, red elderberry and toothache tree (*Zanthoxylum americanum*) were observed. The ground story component was moderately diverse and included yellow trout lily, sedges, bloodroot, violets, toothwort, wild onion, red raspberry, jack-in-the-pulpit, enchanter's nightshade (*Circaea lutetiana*), white snake root and squirrel corn (*Dicentra canadensis*). Occasionally, the non-native European buckthorn shrub (*Rhamnus cathartica*) was found.



**Photo 7. More mature sugar maple-beech mesic woods.**

*Tree Lines.* (Land Cover Type 11, Figure 1). A number of tree lines were found on the Mahar Property and separated most of the agricultural fields. A combination of non-native and native species was typically found in the tree lines. Non-natives were typically more prevalent in these tree covered areas do most likely to the adjacency of the agricultural fields. Natives such as gray dogwood (*Cornus racemosa*), pin cherry, red maple, willows (*Salix* sp.), bur oak (*Quercus macrocarpa*), basswood, wild black cherry, smooth and staghorn sumacs (*Rhus glabra*, *R. typhina*), blackberry (*Rubus allegheniensis*), red raspberry, wild onion, sedges and Canada goldenrod (*Solidago canadensis*) were observed as were non-natives such as dandelion, garlic mustard, dame's rocket, dock (*Rumex* sp.), honeysuckles (*Lonicera* spp.) and multiflora rose. Agricultural field stones had also been deposited in many of the tree lines.

*Young Woodland.* (Land Cover Type 10, Figure 1). A small size, young-aged woodland was located in the north central portion of the Mahar Property along Bovee Road (Photographs 8 & 9). A residential outlot comprised the western boundary of this woodland. Young ash trees (30 yrs of age or younger), hawthorns (*Crataegus* spp.) and apple trees (*Malus* spp.) with scattered red maples comprised the wooded canopy. Shrubby species, both native and non-native were dense in most of this woodland. Non-native of European buckthorn, honeysuckle, multiflora rose and natives such as gray dogwood, young ash trees/saplings, elderberry (*Sambucus canadensis*) were also prominent in this woodland. A few native herbaceous species were observed, such as, sedges, farewell-summer aster (*Symphotrichum lateriflorum*), and wild onion. Garlic mustard has aggressively invaded into this woodland.



**Photo 8. Young woodland with ash trees, European buckthorn, and garlic mustard.**



**Photo 9. Young woodland with abundant honeysuckles and garlic mustard.**

*Scrub/shrub areas.* (Land Covers Types 2, 7 & 9, Figure 1). Three drumlins were found on the Mahar Property and consisted mostly of disturbed scrub/shrub or small forest areas and non-native cool season grass openings/areas.



The Science Hill Drumlin (Land Cover Types s 2 & 9, Figure 1) was found along Bovee Road in the central portion of the Mahar Property. The top of the Science Hill Drumlin was comprised of an old field/pasture encompassed by narrow tree lines along the north, east and west top of the drumlin. The south slope of the drumlin was dominated by a steeply sloped scrub-shrub and disturbed woodland (Photograph 10). The old field had mostly non-native species such as orchard grass (*Dactylis glomerata*), Kentucky blue grass (*Poa pratensis*), dandelion, clovers (*Trifolium* spp.), lance leaved plantain (*Plantago lanceolata*) sulfur cinquefoil (*Potentilla recta*) and Queen Anne's lace (*Daucus carota*). A few native non-conservative plant species were also observed in the old field. These included Canada goldenrod, fleabane (*Erigeron* sp.), hairy aster (*Symphotrichum pilosum*) and red osier dogwood (*Cornus stolonifera*).



**Photo 10. Young shrubby woodland located on Science Hill Drumlin.**

The disturbed wooded portion of the Science Hill drumlin, most of which was located on the steeper sloped areas, was comprised of non-native and native woody species (Photograph 11). Non-native woody species included European buckthorn, hawthorn, honeysuckle, multiflora rose and apple trees. Native woody species included ash (*Fraxinus* sp.), red osier dogwood, gray dogwood, chokecherry, smooth sumac, wild black cherry, prickly ash, poison ivy and wild grape (*Vitis* sp.). Some areas were heavily shade suppressed with little to no ground story vegetation (Photograph 12)



**Photo 11. Young, shrubby area on Science Hill Drumlin.**



**Photo 12. Shade suppressed woodland area on Science Hill Drumlin.**

Patches of shrubs, such as gray dogwood were dense in some areas, such as along the south slope. Portions of the south facing slope contained a mixture of non-native and native herbaceous species interspersed between the shrub patches. Commonly observed native species included, black raspberry, hairy aster, white avens, strawberry (*Fragaria virginiana*), arrow leaf aster (*Symphotrichum sagittifolius*), New England aster (*Symphotrichum novae-angliae*), gray goldenrod (*Solidago nemoralis*), grass leaf goldenrod (*Euthamia graminifolia*), poverty oats grass (*Danthonia spicata*) and a sedge species (*Carex* sp.). Non-native species were also present and include garlic mustard, orchard grass, Kentucky blue grass, dandelion, lesser bur dock and Canada blue grass (*Poa compressa*).

The Pinnacle Hill drumlin (Land Cover Type 7) was the largest of the three drumlins on the Mahar Property and was found along the southern border in the central portion of the site. The western two thirds of the drumlin which comprised the steepest slopes is a scrub- shrub dominated community. The eastern third of the drumlin, where slopes are not quite as steep, had a scrubby more open grassed understory community (Photograph 13) that graded into a sugar maple beech mesic forest. In this slope area a small spring daylighted at mid slope of the drumlin and the spring flows into the scrub/shrub wetland below.

The presence of old apple trees provided evidence that this drumlin, as were the other two, likely were previously managed as an apple orchard. The orchard is no longer maintained and a variety of woody species have invaded and now they dominate the drumlin. Gray dogwood, pin cherry, young red maple, young ash, chokecherry and Missouri Gooseberry (*Ribes missouriense*) were observed as were non-native woody species such as honeysuckle, hawthorns, and multiflora rose. Ground story vegetation was absent and/or almost totally shade suppressed and when present was confined to more open areas of the scrub-shrub complex. Densely shaded ground areas contained an almost total cover of mosses. The scattered native ground story plants found mostly in scattered light gaps included white avens, sedges, arrow leaf aster, Canada goldenrod, enchanter's nightshade (*Circaea lutetiana*), black raspberry and red raspberry, strawberry, violets, mayapple (*Podophyllum peltatum*), woodland smartweed (*Polygonum virginiana*) and yellow trout lily. Non natives were also scattered and included dandelion, lance leaf plantain, orchard grass, clovers, Kentucky blue grass, burdock and dames rocket. A non-native highly aggressive invasive species; black swallow-wort (*Cynanchum louiseae*) was occasionally observed.



**Photo 13. Pinnacle Hill drumlin scrub/shrub area. Note spring in lower left corner.**

The third drumlin on the Mahar property was called the Blue Hill Drumlin (Land Cover Types 2 & 7) and was located along the eastern property boundary (Figure 1). The presence of old apple trees, similar to the Pinnacle Hill Drumlin, suggested that these drumlins were historically used as an orchard. The apple trees are no longer maintained and have been out grown by a variety of weedy species such as honeysuckles, brome grasses (*Bromus sp.*), blue grasses (*Poa sp.*) and orchard grass along with Queen Anne's lace, dandelion, yarrow (*Achillea millefolium*), knapweed (*Centaurea maculosa*), lance leaved plantain,, strawberry, hairy aster, gray goldenrod, gray dogwood and common milkweed (Photographs 14, 15, 16 & 17).



**Photo 14. Densely shade suppressed mid slope of Blue Hill Drumlin.**



**Photo 15. Cool season non-native grassy/shrub area on Blue Hill Drumlin.**



**Photo 16. Shrubby area with mixed cool season non-native grasses on Blue Hill Drumlin.**



**Photo 17. Sparsely vegetated sloped area of the Blue Hill Drumlin.**

*Wetlands.* Wetlands in the Mahar Property have been delineated and described in 2011 (Barton and Loguidice 2011). The following sections further describe the wetland community types on the Mahar property.

*Cattail Wetland* (Land Cover Type 4, Figure 1) - A small cattail (*Typha* sp.) wetland was found in a low spot along Bovee Road and most likely was an isolated wetland. This area contained what appeared to be narrow leaf cattail (*Typha angustifolia*), willow and a few other species.

*Forested Wetlands* (Land Cover Type 5, Figure 1) - Several forested wetland areas were found on the Mahar property. The larger of the forested wetlands was located in the southeast corner of the Mahar Property. The larger forested wetland was part of a larger connected forested wetland complex that continued off site to the southeast. Most of this wetland had 6-12 inches of standing water in April (Photograph 18). Red maple seedlings had germinated and were the dominant species observed growing throughout the areas where standing water was present, such as vernal pool areas. Downed wood, mostly branches were located throughout the wetland, most likely the result of past wind storms.

Canopy cover of tree species was dominated by red maple with varying abundances of green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus americana*), silver maple (*Acer saccharinum*), black willow (*Salix nigra*) and sugar maple. The understory woody component was sparse and comprised of spicebush, button bush (*Cephalanthus occidentalis*), red osier dogwood, gray dogwood, elderberry, nanny berry (*Viburnum lentago*), marsh rose (*Rose palustris*) with some tooth ache tree in drier areas. Ground story species included, wild onion, sensitive fern (*Onoclea sensibilis*), white avens, turtle head (*Chelone glabra*), skunk cabbage (*Symplocarpus foetidus*), fowl manna grass (*Glyceria striata*), violets, horsetail (*Equisetum* sp.), lake sedge (*Carex lacustris*), jewelweed (*Impatiens capensis*), dewberry (*Rubus hispidus*), wild iris (*Iris versicolor*), poison hemlock (*Cicuta maculata*), Farewell to summer aster, marsh fern (*Thelypteris palustris*), meadow rue (*Thalictrum dasycarpum*), poison ivy, royal fern (*Osmunda regalis*), sedges, wood reed grass (*Cinna arundinacea*), buttercups (*Ranunculus* sp.), red stem aster (*Aster puniceus*), hop sedge (*Carex lupulina*), jack-in-the-pulpit, cow parsnip (*Sium suave*), tufted loosestrife (*Lysimachia thyrsiflora*) and false nettle (*Boehmeria cylindrica*). The NY State Exploitably Vulnerable species; Canada lily (*Lilium canadense*) was also observed. Drier slightly higher elevation areas contained species such as white snake root, Canada may flower (*Maianthemum canadense*) and enchanters nightshade (Photograph 19).



**Photo 18. Forested wetland with standing water.**



**Photo 19. Drier portion of the forested wetland.**

A few non-native species were found in the larger wooded wetland and included multiflora rose, nightshade, reed grass (*Phragmites australis*) and high bush cranberry (*Viburnum opulus*). This wetland area had evidence of past logging with a number of cut stumps of various age.

Three smaller wooded wetlands are located in the southwest corner of the property (Land Cover 5). These wetlands have been impacted to varying degrees by the previous agricultural related activities that occurred on the Mahar Property. The forested wetland farthest east and its surrounding upland woods was comprised of a diverse compliment of plants (Photograph 20). This area transitions from upland to a small red maple swamp. Areas surrounding this small wetland were mature second growth, with evidence of past logging.



**Photo 20. Small forested wetland depression in southeast area of the Mahar Property.**

Woody native plant species observed included sugar maple, green ash, beech, red maple, elms (*Ulmus* sp.), spice bush, red elderberry, swamp rose (*Rosa palustris*), gray dogwood, nanny berry, June berry (*Amelanchier* sp.), wild black currant (*Ribes americana*), alternate leaved dogwood, Wahoo (*Euonymus atropurpurea*), red osier dogwood, wild grape and button bush. An occasional non-native woody plant or vine was observed such as multiflora rose, European buckthorn, honeysuckle, high bush cranberry and nightshade (*Solanum dulcamara*). Non-native herbaceous species were garlic mustard and cleavers (*Galium aparine*).

The ground story was quite diverse with a combination of upland and wetland species. Native herbaceous species included sensitive fern, hop sedge, fowl manna grass, calico aster, jewelweed, common rush (*Juncus effusus*), strawberry, onion, horsetail (*Equisetum arvense*), wood fern (*Dryopteris* sp.), wild cucumber (*Echinocystis lobata*), skunk cabbage, spring cress (*Cardamine bulbosa*), dewberry (*Rubus* sp.), sedges, water hemlock, wild iris, meadow rue, bed straw (*Galium* sp.), royal fern, violet, turtlehead, Buttercups (*Ranunculus* sp.), Parasol white top aster (*Doellingeria umbellatus*), white avens, tall hairy grooveburr (*Agrimonia gryposepala*), tufted loosestrife (*Lysimachia thyrsiflora*), water parsnip (*Sium suave*), jack-in-the pulpit, Canada may flower (*Maianthemum canadense*), Canada lily, bishops cap (*Mitella diphylla*), white snake root, Enchanter's nightshade, false nettle and false Solomon's seal (*Smilacina racemosa*).

The two other small forested wetlands (land Cover Type 5) in the eastern portion of the Mahar property were also small red maple swamp areas that have been partially filled as part of the removal of glacial rocks from the surrounding agricultural lands (Photographs 21 & 22). Most of the rock material appears to have been placed in this area some years ago. The deeper flooded red maple swamp portions of these two wetland lacked vegetation cover. Downed woody vegetation was abundant. Red maple, poison ivy, reed grass, hop sedges, sensitive fern, bitternut hickory were some commonly observed species.





**Photo 21. Small depressional forested wetland in southeastern corner of Mahar Property.**



**Photo 22. Wet forest/ponded area in the southeastern corner of the Mahar Property.**

*Scrub/Shrub Wetland.* (Land Cover Type 6)- An open scrub/shrub wetland, with a history of previous agricultural activity (based on old aerial photography interpretation) was found in the central portion of the Mahar Property, immediately to the east of the larger forested wetland on the site (Photographs 23, 24 & 25). Dogwoods, willows, nannyberry and small ashes were interspersed with cool season grasses such as Kentucky blue grass and redtop grass (*Agrostis* sp.) with native sedges such as awl fruited sedge (*Carex stipata*), fox sedge (*Carex vulpinoidea*) and dark green bulrush

(*Scirpus atrovirens*). This area was historically farmed and has only recently (perhaps 20 years) reverted back to wetland conditions.



**Photo 23. Cattail patch within the scrub/shrub wetland.**



**Photo 24. Cool season non-native grass area in the scrub/shrub wetland.**



**Photo 25. Scrub/shrub wetland in Mahar Property.**

#### Endangered Resources

During our field investigations on, we did not identify any known or suspected state or federally listed plant or animal species. An Exploitably Vulnerable listed species; Canada lily (*Lilium canadense*) was found at several locations in the Mahar Property. Our investigations were conducted in the early part of the growing season, and thus it was not possible to provide positive identification of the *Lilium* species. It is possible that the some of the individual plants may also have been Turk's cap lily (*Lilium michiganense*) a State of NY Endangered species known to occur in Monroe County. Given the extensive historic and current agricultural land use impacts to the property, no other listed plant species are anticipated to be located in the Mahar site. Positive identification of the *Lilium* species should be made when the species is in flower.

#### Wildlife Sightings

Wildlife encountered during the site visit was comprised of bird species, utilizing the site or flying over and a few amphibians heard calling in the wetlands. Commonly seen and heard songbirds included those of open and brushy agricultural lands and woodlands, such as robin, cardinal, turkey vulture, yellow-rumped warbler, pileated wood pecker, song sparrow, field sparrow, blue jay, crow, red tailed hawk and redwing blackbird. Amphibians hear calling were spring peepers.

## OPPORTUNITIES *for* RESTORATION & MANAGEMENT

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In the process of conducting the natural resource survey, we identified a number of critical natural resource features which we believe merit attention in the future restoration planning and land management efforts for the Property.

- Of the 200+ acres comprising the Maher property, approximately 25% of the site currently contains wetlands. The entire delineated wetland area occupies hydric soils, with the some edges of the delineated wetland more or less disturbed by agricultural practices. Nevertheless, a large portion of the wetland contains remnant forested wetland conditions. Graminoid and shrub covered wetland appears to have developed a number of years ago when an agricultural field was abandoned.
- Mesic forests are for the most part in a healthy ecological condition, containing a diverse spring ephemeral population, provides an opportunity to integrate mesic forest elements into any proposed restoration of the property.
- Topographic relief is dramatic because of the drumlins and could provide an opportunity to integrate a diverse complex of natural wetland and upland forests with upland grassland communities on the drumlins and agricultural fields comprised of upland and wetland grassland communities along moisture gradients.

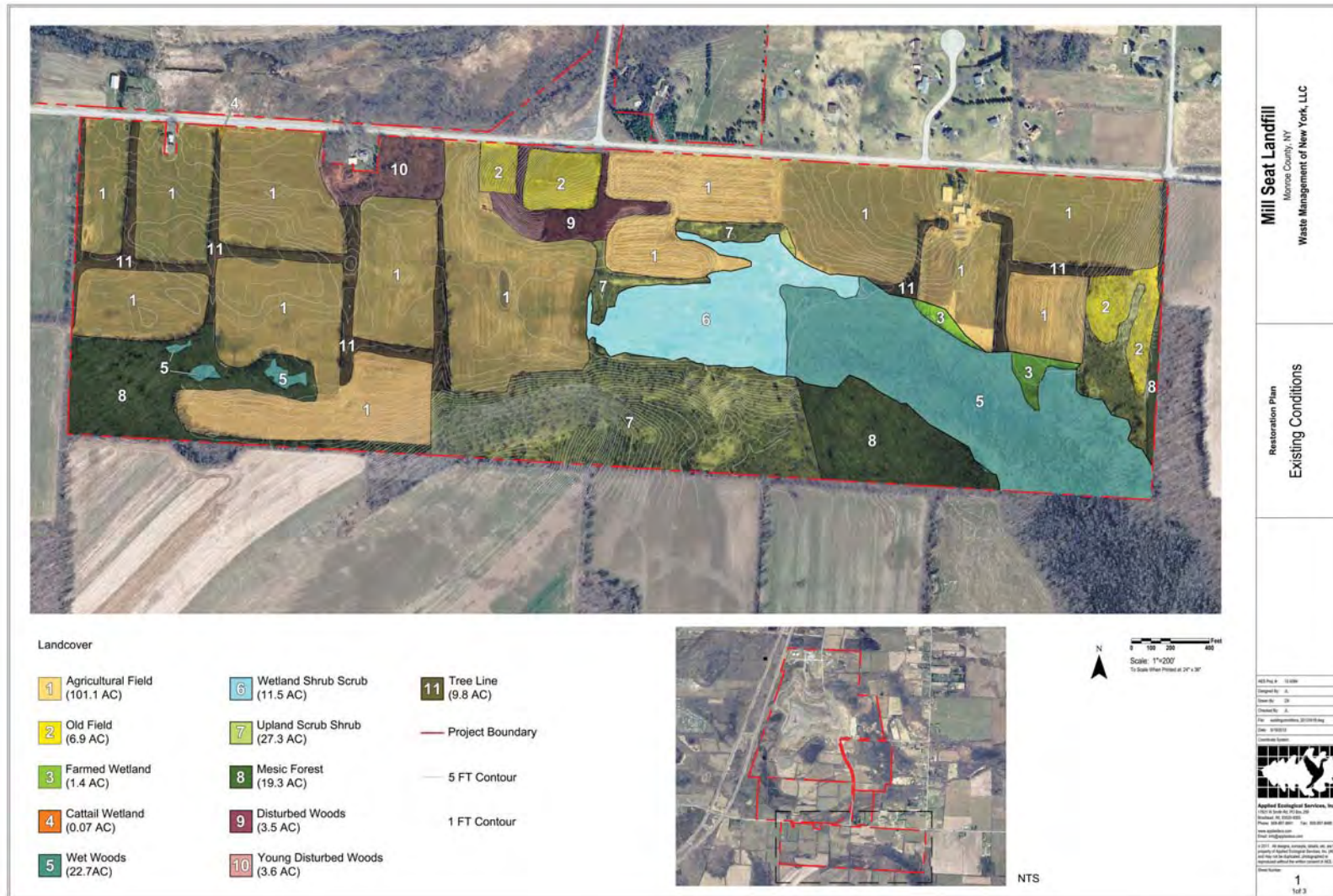
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Figure 1. Existing Conditions Map



## Exhibit 1. Plant Community Species Lists

### Science Hill Drumlin Mahar Property

Scientific Name	Common Name
<i>Agrimonia gryposepala</i>	Tall hairy grooveburr
<i>Alliaria petiolata</i> *	Garlic mustard
<i>Allium canadense</i>	Wild onion
<i>Arctium minus</i> *	Burdock
<i>Cornus racemosa</i>	Gray dogwood
<i>Crataegus mollis</i>	Hawthorn
<i>Dactylis glomerata</i> *	Orchard grass
<i>Danthonia spicata</i>	Poverty oats grass
<i>Echinocystis lobata</i>	Wild cucumber
<i>Fragaria virginiana</i>	Strawberry
<i>Fraxinus pennsylvanica</i>	Green ash
<i>Galium aparine</i> *	Cleavers
<i>Geum canadense</i>	White avens
<i>Lonicera tatarica</i> *	Honeysuckle
<i>Malus sp. *</i>	Apple tree
<i>Poa compressa</i> *	Canada bluegrass
<i>Poa pratensis</i> *	Kentucky bluegrass
<i>Prunus americana</i>	Wild plum
<i>Prunus pensylvanica</i>	Pin cherry
<i>Prunus serotina</i>	Wild black cherry
<i>Rhamnus cathartica</i> *	European buckthorn
<i>Rhus radicans</i>	Poison ivy
<i>Rosa multiflora</i> *	Multiflora rose
<i>Rubus occidentalis</i>	Black raspberry
<i>Solidago nemoralis</i>	Old-field goldenrod
<i>Symphotrichum novae-angliae</i>	New England aster
<i>Symphotrichum lateriflorum</i>	Calico aster
<i>Symphotrichum sagittifolius</i>	Arrowleaf aster
<i>Taraxacum officinale</i> *	Dandelion
<i>Vitis riparia</i>	Wild grape
<i>Zanthoxylum americanum</i>	Toothache tree (Prickly ash)
*Non-native	

<b>Upland Mesic Forest SE Corner Mahar Property</b>	
<b>Scientific Name</b>	<b>Common Name</b>
<i>Acer saccharum</i>	Sugar maple
<i>Actaea pachypoda</i>	Doll's eyes
<i>Alliaria petiolata</i>	Garlic mustard
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit
<i>Carex</i> sp.	Unidentified Sedge
<i>Circaea lutetiana</i>	Enchanter's nightshade
<i>Dentaria laciniata</i>	Toothwort
<i>Dicentra canadensis</i>	Squirrel corn
<i>Epifagus virginiana</i>	Beech drops
<i>Erythronium americanum</i>	Yellow trout lily
<i>Eupatorium rugosum</i>	White snake root
<i>Fagus grandifolia</i>	Beech
<i>Fraxinus americana</i>	White ash
<i>Geranium robertianum</i>	Herb robert
<i>Lindera benzoin</i>	Spicebush
<i>Ostrya virginiana</i>	Ironwood
<i>Parthenocissus quinquefolia</i>	Woodbine
<i>Prunus pensylvanica</i>	Pin cherry
<i>Prunus virginiana</i>	Choke cherry
<i>Ranunculus recurvatus</i>	Buttercup
<i>Rhamnus cathartica</i> *	European buckthorn
<i>Ribes</i> sp.	Gooseberry
<i>Rubus idaeus</i>	Raspberry
<i>Rubus occidentalis</i>	Black raspberry
<i>Sambucus pubens</i>	Red elderberry
<i>Sanguinaria canadensis</i>	Bloodroot
<i>Solidago canadensis</i>	Canada goldenrod
<i>Viola sororia</i>	Violet
<i>Zanthoxylum americanum</i>	Tooth ache tree (Prickly ash)

#### **Scrub/Shrub Marsh Land Cover 5 Mahar Property**

<b>Scientific Name</b>	<b>Common Name</b>
<i>Agrostis alba</i>	Red top grass
<i>Asclepias incarnata</i>	Swamp milkweed
<i>Carex stipata</i>	Awl fruited sedge
<i>Carex vulpinoidea</i>	Fox sedge
<i>Cirsium arvense</i> *	Canada thistle
<i>Cornus racemosa</i>	Gray dogwood
<i>Cornus stolonifera</i>	Red osier dogwood
<i>Dipsacus sylvestris</i> *	Teasel
<i>Epilobium coloratum</i>	Cinnamon willow herb
<i>Equisetum arvense</i>	Horsetail

<i>Eupatoriadelphus maculatus</i>	Joe-pye weed
<i>Fraxinus nigra</i>	Black ash
<i>Juncus</i> sp.	Rush
<i>Mentha arvensis</i>	Wild mint
<i>Muhlenbergia mexicana</i>	Mexican Muhly grass
<i>Salix petiolaris</i>	Willow
<i>Scirpus atrovirens</i>	Dark green bulrush
<i>Symphotrichum lateriflorum</i>	Calico aster
<i>Symphotrichum puniceum</i>	Red stem aster
<i>Taraxacum officinale</i> *	Dandelion
<i>Typha latifolia</i>	Broad-leaf cattail
<i>Viburnum lentago</i>	Nannyberry
*Non-native species	

### Young Woodland Land Cover 10 Mahar Property

Scientific Name	Common Name
<i>Acer rubrum</i>	Red maple
<i>Alliaria petiolata</i> *	Garlic mustard
<i>Allium</i> sp.	Onion
<i>Carex</i> sp.	Sedge
<i>Cornus racemosa</i>	Gray dogwood
<i>Crataegus crus-galli</i>	Hawthorn
<i>Fraxinus pennsylvanica</i>	Green ash
<i>Galium aparine</i> *	Cleavers
<i>Geum canadense</i>	White avens
<i>Lonicera tatarica</i> *	Honeysuckle
<i>Malus</i> sp.*	Apple tree
<i>Prunus pensylvanica</i>	Pin cherry
<i>Rhamnus cathartica</i> *	European buckthorn
<i>Ribes americanum</i>	Wild black current
<i>Rosa multiflora</i> *	Multiflora rose
<i>Sambucus canadensis</i>	Elderberry
<i>Symphotrichum lateriflorum</i>	Calico aster
<i>Taraxacum officinale</i> *	Dandelion
*Non-native Species	



**Pinnacle Hill Drumlin**

<i>Scientific Name</i>	<b>Common Name</b>
<i>Acer rubrum</i>	Red maple
<i>Achillea millefolium</i> *	Yarrow
<i>Allium sp.</i>	Onion
<i>Anemone virginiana</i>	Tall anemone
<i>Arctium minus</i> *	Burdock
<i>Carex rosea</i>	Rose's sedge
<i>Carex sp.</i>	Sedge
<i>Carya cordiformis</i>	Butternut hickory
<i>Circaea lutetiana</i>	Enchanter's nightshade
<i>Cornus racemosa</i>	Gray dogwood
<i>Crataegus sp.</i>	Hawthorn
<i>Cynanchum sp</i> *	Swallowwort
<i>Dactylis glomerata</i> *	Orchard grass
<i>Erythronium americanum</i>	Yellow trout lily
<i>Fragaria virginiana</i>	Strawberry
<i>Geranium robertianum</i>	Herb Robert
<i>Geum canadense</i>	White avens
<i>Hesperis matronalis</i> *	Dame's rocket
<i>Lonicera tatarica</i> *	Honeysuckle
<i>Malus sp.</i> *	Apple tree
<i>Plantago lanceolata</i> *	Lanced-leaved plantain
<i>Poa pratensis</i> *	Kentucky blue grass
<i>Podophyllum peltatum</i>	May apple
<i>Polygonum virginianum</i>	Woodland knotweed
<i>Prunella vulgaris</i>	Heal all
<i>Prunus pensylvanica</i>	Pin cherry
<i>Prunus serotina</i>	Wild black cherry
<i>Rhamnus cathartica</i> *	European buckthorn
<i>Ribes missouriense</i>	Missouri gooseberry
<i>Rosa multiflora</i> *	Multiflora rose
<i>Solidago altissima</i>	Tall goldenrod
<i>Solidago canadensis</i>	Canada goldenrod
<i>Symphyotrichum novae-angliae</i>	New England aster
<i>Symphyotrichum sagittifolius</i>	Arrowleaf aster
<i>Taraxacum officinale</i> *	Dandelion
<i>Trifolium pratense</i> *	Red clover
<i>Viola sororia</i>	Violet
*Non-Native species	

**Mesic Upland Forest southwest corner of the Mahar Property**

Scientific Name	Common Name
<i>Acer rubrum</i>	Red maple
<i>Acer saccharum</i>	Sugar maple
<i>Alliaria petiolata</i>	Garlic mustard
<i>Allium</i> sp.	Onion
<i>Allium tricoccum</i>	Wild leek
<i>Arctium minus</i> *	Burdock
<i>Arisaema triphyllum</i>	Red osier dogwood
<i>Carex albursina</i>	Blunt-scaled wood sedge
<i>Carex pensylvanica</i>	Pennsylvania sedge
<i>Carex radiata</i>	Straight-styled wood sedge
<i>Carya cordiformis</i>	Bitternut hickory
<i>Carya ovata</i>	Shagbark hickory
<i>Caulophyllum thalictroides</i>	Blue cohosh
<i>Cornus alternifolia</i>	Alternate-leaved dogwood
<i>Cornus racemosa</i>	Gray dogwood
<i>Dentaria laciniata</i>	Toothwort
<i>Erythronium americanum</i>	Yellow trout lily
<i>Fagus grandifolia</i>	Beech
<i>Fraxinus americana</i>	White ash
<i>Fraxinus</i> sp.	Ash
<i>Hesperis matronalis</i> *	Dame's rocket
<i>Hydrophyllum virginianum</i>	Virginia water leaf
<i>Hystrix patula</i>	Bottlebrush grass
<i>Lindera benzoin</i>	Spicebush
<i>Menispermum canadense</i>	Moonseed
<i>Ostrya virginiana</i>	Ironwood
<i>Parthenocissus quinquefolia</i>	Woodbine
<i>Prunus pensylvanica</i>	Pin cherry
<i>Prunus serotina</i>	Wild black cherry
<i>Prunus virginiana</i>	Chokeberry
<i>Quercus rubra</i>	Red oak
<i>Ranunculus abortivus</i>	Buttercup
<i>Rhus radicans</i>	Poison ivy
<i>Ribes cynosbati</i>	Gooseberry
<i>Rosa multiflora</i> *	Multiflora rose
<i>Rubus idaeus</i>	Raspberry
<i>Rubus occidentalis</i>	Black raspberry
<i>Sambucus pubens</i>	Red-berried elder
<i>Sanguinaria canadensis</i>	Bloodroot
<i>Smilacina racemosa</i>	False Solomon's seal
<i>Taraxacum officinale</i> *	Dandelion
<i>Tilia americana</i>	Basswood
<i>Trillium grandiflorum</i>	Large flower trillium
<i>Ulmus rubra</i>	Red elm

<i>Ulmus</i> sp.	Elm
<i>Viola sororia</i>	Violet
*Non-native species	

### Smaller Forested Wetlands in southwest corner of the Mahar Property

<i>Acer rubrum</i>	Red maple
<i>Acer saccharum</i>	Sugar maple
<i>Agrimonia gryposepala</i>	Tall hairy grooveburr
<i>Allium</i> sp.	Onion
<i>Amelanchier</i> sp.	Juneberry
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit
<i>Boehmeria cylindrica</i>	False nettle
<i>Cardamine bulbosa</i>	Bulbous cress
<i>Carex lacustris</i>	Lake bank sedge
<i>Carex lupulina</i>	Hop sedge
<i>Carex radiata</i>	Straight-style wood sedge
<i>Cephalanthus occidentalis</i>	Buttonbush
<i>Chelone glabra</i>	Turtlehead
<i>Cicuta maculata</i>	Water hemlock
<i>Circaea lutetiana</i>	Enchanter's nightshade
<i>Cornus alternifolia</i>	Alternate-leaf dogwood
<i>Cornus racemosa</i>	Gray dogwood
<i>Cornus stolonifera</i>	Red osier dogwood
<i>Doellingeria umbellata</i>	Flat-topped aster
<i>Dryopteris thelypteris</i>	Marsh fern
<i>Equisetum arvense</i>	Horsetail
<i>Euonymus alatus</i>	Burning bush
<i>Eupatorium rugosum</i>	White snakeroot
<i>Fagus grandifolia</i>	Beech
<i>Fraxinus pennsylvanica</i>	Green ash
<i>Galium</i> sp.	Bedstraw
<i>Galium triflorum</i>	Sweet-scented bedstraw
<i>Geum canadense</i>	White avens
<i>Glyceria striata</i>	Foul manna grass
<i>Impatiens capensis</i>	Jewelweed
<i>Iris virginica shrevei</i>	Wild iris
<i>Lilium canadense/ michiganense</i>	Canada/Turk's cap lily
<i>Lindera benzoin</i>	Spice bush
<i>Lonicera tatarica</i> *	Honeysuckle
<i>Lycopus rubellus</i>	Water horehound
<i>Lysimachia thyrsiflora</i>	Tufted loosestrife
<i>Maianthemum canadense</i>	Canada may flower
<i>Mitella diphylla</i>	Bishop's cap
<i>Onoclea sensibilis</i>	Sensitive fern
<i>Osmunda regalis</i>	Royal fern
<i>Ranunculus abortivus</i>	Buttercup

<i>Ranunculus recurvatus</i>	Buttercup
<i>Rhamnus cathartica</i> *	European buckthorn
<i>Ribes americanum</i>	Wild black current
<i>Rosa multiflora</i> *	Multiflora rose
<i>Rosa palustris</i>	Swamp rose
<i>Rubus strigosus</i>	Red raspberry
<i>Salix interior</i>	Sand bur willow
<i>Sambucus pubens</i>	Red elderberry
<i>Sium suave</i>	Water parsnip
<i>Smilacina racemosa</i>	False Solomon's seal
<i>Solanum dulcamara</i> *	Nightshade
<i>Symphotrichum lateriflorum</i>	Calico aster
<i>Symplocarpus foetidus</i>	Skunk cabbage
<i>Thalictrum dasycarpum</i>	Meadow rue
<i>Urtica procera</i>	Nettle
<i>Viburnum lentago</i>	Nannyberry
<i>Viburnum opulus</i> *	Highbush cranberry
<i>Viola nephrophylla</i>	Violet
<i>Vitis riparia</i>	Wild grape
*Non-native species	

**Supplemental Wetland Delineation Project Memorandum,  
October 4, 2013**

**Barton & Loguidice, P.C.**

**Memo to:** Project File **File:** 1242.022.013  
**From:** Johanna E. Duffy **Date:** October 4, 2013  
**Re:** Supplemental Wetland Delineation  
Proposed Mill Seat Landfill Expansion

**Wetland RG-6**

On August 13, 2013, Todd Phillips and Johanna Duffy from Barton & Loguidice, P.C. (B&L) completed a revised delineation of New York State Department of Environmental Conservation (NYSDEC) mapped freshwater wetland RG-6. This wetland is located directly south of the existing Mill Seat Facility landfill footprint, and is located within the limits of disturbance for the Proposed Landfill Expansion. Wetland RG-6 was initially delineated in November 2008 for the proposed Soil Borrow Area project at the Mill Seat Landfill Facility. This wetland is referred to as delineated Wetland B in the Wetland Delineation Report for the Proposed Mill Seat Landfill Soil Borrow Area Expansion – August 2009. Due to the age of this initial delineation effort and the implementation of the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region since that time, it was determined that a re-delineation of the Proposed Mill Seat Landfill Expansion area was warranted.

The discharge channel that conveys flow from RG-6 south to NYSDEC mapped freshwater wetland RG-5 and Hotel Creek was reconfirmed in the field as meeting the definition of a Water of the U.S. The characteristics of this channel have not changed; therefore, the previously mapped limits still represent the current channel boundaries. The discharge channel remains 0.46 acres in size, and approximately 1500 linear feet in length and 4 to 8 feet in width. As a result of this updated delineation effort, the acreage associated with the delineated boundary of Wetland RG-6 increased from 12.08 acres in 2008 to 13.46 acres. Attached Figure 1 shows the current limits of Wetland RG-6 and the drainage channel. Field datasheets from the delineation of Wetland RG-6 are included in Appendix A.

**Wetland RG-7**

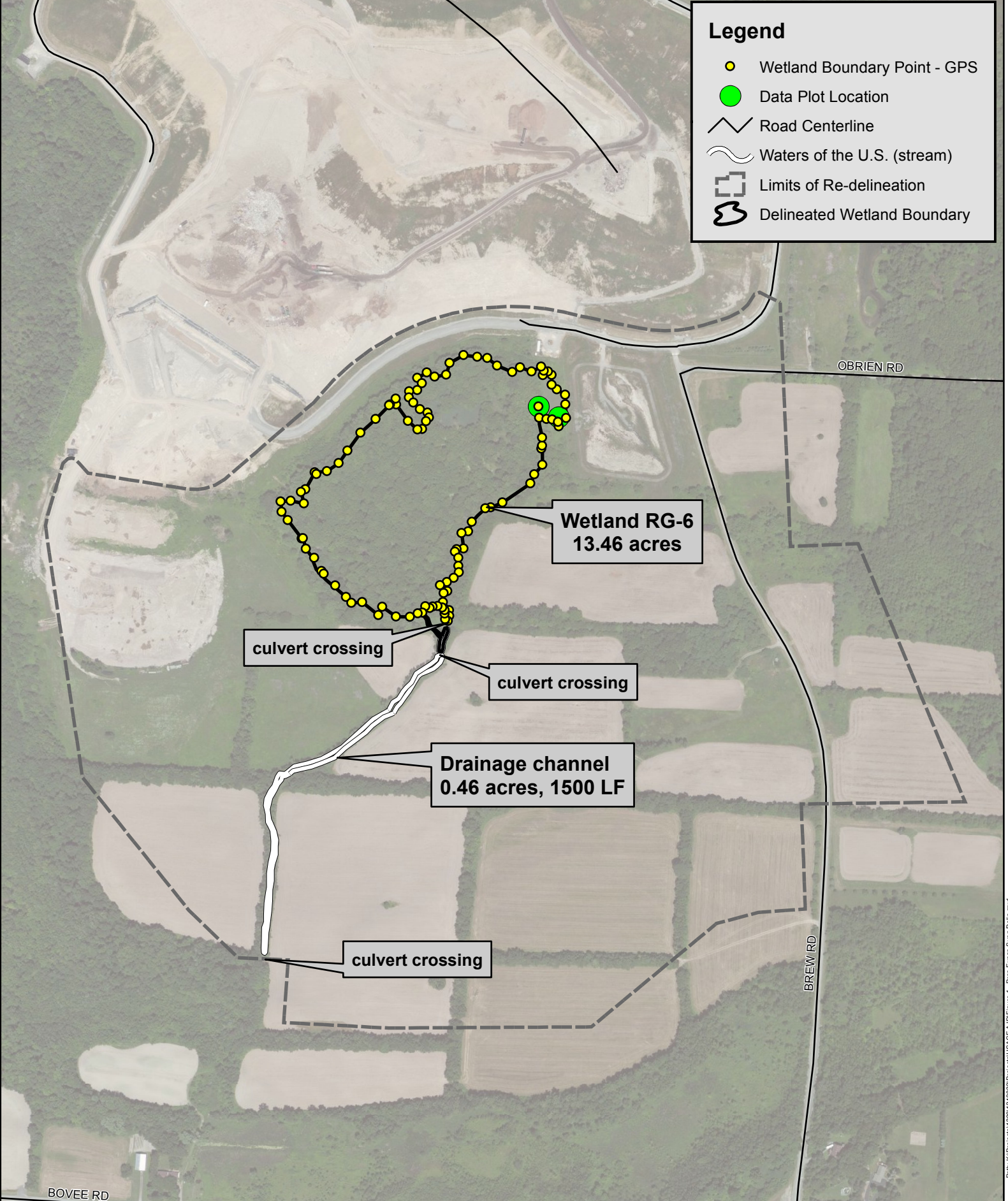
Another component of the Proposed Landfill Expansion project is to terminate the Town of Riga owned O'Brien Road at the last residential driveway (south side) and install a turnaround for school buses, plow trucks, and other vehicles. Monroe County owns lands north and south of O'Brien road west of this location. Based on the limits of disturbance for the Proposed Landfill Expansion, O'Brien Road would need to be abandoned at some point east of its intersection with Brew Road. Abandoning the roadway prior to its travel through NYSDEC mapped freshwater Wetland RG-7 will protect the wetland community from unnecessary traffic and loitering, and would also provide the potential opportunity to remove the existing roadway embankment and culvert within the wetland to provide a more continuous connection within Wetland RG-7. A wetland delineation of the eastern limits of Wetland RG-7 was completed at its crossing of O'Brien Road to ascertain how much area was available to design the turnaround location. This delineation was also completed on August 13, 2013, by the same personnel from B&L. Attached Figure 2 illustrates the delineated limits of wetland RG-7 that were identified in the field. Field datasheets for Wetland RG-7 are included in Appendix B.

JED/akg  
Attachment

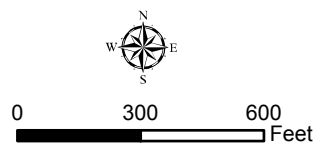
Figures 1 & 2

### Legend

- Wetland Boundary Point - GPS
- Data Plot Location
- Road Centerline
- ~ Waters of the U.S. (stream)
- ▭ Limits of Re-delineation
- ⊃ Delineated Wetland Boundary



Path: K:\Projects\1200\1242\2013\Projects\USACE\A\DF\Figure 1 - Prop. Expan. Supp. Deline.mxd





**Legend**

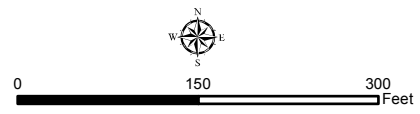
- Previous GPS Points
- Wetland Boundary Point - GPS
- Data Plot Location
- Road Centerline
- ▭ Limits of Delineation
- Ⓢ Delineated Wetland Boundary

**Wetland RG-7**  
1.40 acres within delineated limits

**Wetland RG-7**  
0.02 acres within delineated limits

**Wetland RG-7**  
1.05 acres within delineated limits

O'BRIEN RD



Path: K:\Projects\12011242022\Project\USACE\A&P\Figure 2 - O'Brien Turnaround Sup Deline.mxd

# Appendix A

Wetland RG-6 Field Datasheets

August 13, 2013

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mill Seat Landfill – south of existing footprint City/County: Riga, Monroe County Sampling Date: 8/13/13  
 Applicant/Owner: Waste Management / Monroe County State: NY Sampling Point: Wet RG-6 Meadow  
 Investigator(s): Todd J. Phillips and Johanna E. Duffy Section, Township, Range: Town of Riga  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave Slope (%): 0-2%  
 Subregion (LRR or MLRA): LRR-L Lat: 43° 03' 17.8" Long: 77° 55' 56.8" Datum: WGS 84  
 Soil Map Unit Name: Churchville silt loam, 0-2% slopes NWI classification: PEM (wet meadow)  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes?  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____		If yes, optional Wetland Site ID: <u>RG-6 Meadow</u>

Remarks: (Explain alternative procedures here or in a separate report.)

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes \_\_\_\_\_ No  Depth (inches): \_\_\_\_\_  
 Water Table Present Yes  No \_\_\_\_\_ Depth (inches): 8  
 Saturation Present Yes  No \_\_\_\_\_ Depth (inches): Surface **Wetland Hydrology Present?** Yes  No \_\_\_\_\_  
 (includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Stormwater pond discharges into meadow area from the east.  
 Soil saturation documented at surface, water table recorded at 8" before soil surface  
 Indicators for hydrology met

**SOIL**

Sampling Point: Wet RG-6 Meadow

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-9	10YR 4/1	98	10YR 4/3	2	C	M	Silty Clay Loam	
9-14	10YR 4/1	94	10YR 5/6	2	C	M	Silty Clay Loam	
			10YR 4/3	2	D	M		
14-24	10YR 5/2	55	10YR 4/6	25	C	M	Sandy Clay	
			10YR4/1	20	D	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soils 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)
- Striped Matrix (S6)
- Dark Surface (S7) (**LRR R, MLRA 149B**)

- Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- Loamy Mucky Mineral (F1) (**LRR K, L**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox DarkSurface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- Coast Prairie Redox (A16) (**LRR K, L, R**)
- 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- Dark Surface (S7) (**LRR K, L, M**)
- Polyvalue Below Surface (S8) (**BLRR K, L**)
- Thin Dark Surface (S9) (**LRR K, L**)
- Iron-Manganese Masses (F12) (**LRR K, L, R**)
- Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: N/A  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

**Remarks:**

Hydric soils present within plot location – indicator F3 met

**VEGETATION** – Use scientific names of plants.

Sampling Point: Wet RG-6 Meadow

<i>Tree Stratum</i> (Plot Size: 30-feet )	Absolute % Cover	Dominant Species?	Indicator Status		
1.					
2.					
3.					
4.					
5.					
6.					
7.					
	5	= Total Cover			
<i>Sapling/Shrub Stratum</i> (Plot Size: 30-feet )					
1. <i>Cornus stolonifera</i>	15	Yes	FACW		
2. <i>Fraxinus pennsylvanica</i>	5	Yes	FACW		
3.					
4.					
5.					
6.					
7.					
	20	= Total Cover			
<i>Herb Stratum</i> (Plot Size: 5-feet )					
1. <i>Solidago gigantea</i>	30	Yes	FACW		
2. <i>Carex vulpinoidea</i>	15	Yes	OBL		
3. <i>Carex scoparia</i>	20	Yes	FACW		
4. <i>Glyceria</i> sp.	10	-	-		
5. <i>Lycopus uniflorus</i>	5	No	OBL		
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
	70	= Total Cover			
<i>Woody Vine Stratum:</i> (Plot Size: 30-feet )					
1.					
2.					
3.					
4.					
5.					
6.					
7.					
		= Total Cover			
<p>Remarks: (Include photo numbers here or on a separate sheet.)</p> <p>Dominance of hydrophytic vegetation present within plot – dominance test completed</p>				<p><b>Dominance Test Worksheet:</b></p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>5</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)</p> <p><b>Prevalence Index Worksheet:</b></p> <p style="text-align:center"><u>Total % Cover of:</u> <span style="float:right"><u>Multiply by:</u></span></p> <p>OBL species <u>          </u> x 1 = <u>          </u></p> <p>FACW species <u>          </u> x 2 = <u>          </u></p> <p>FAC species <u>          </u> x 3 = <u>          </u></p> <p>FACU species <u>          </u> x 4 = <u>          </u></p> <p>UPL species <u>          </u> x 5 = <u>          </u></p> <p>Column Totals: <u>          </u> (A) <u>          </u> (B)</p> <p style="text-align:center">Prevalence Index = B/A =</p> <p><b>Hydrophytic Vegetation Indicators:</b></p> <p><u>          </u> Rapid Test for Hydrophytic Vegetation</p> <p><u>X</u> <u>          </u> Dominance Test is &gt;50%</p> <p><u>          </u> Prevalence Index is #3.0<sup>1</sup></p> <p><u>          </u> Morphological Adaptations<sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet)</p> <p><u>          </u> Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)</p> <p><sup>1</sup>Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.</p> <p><b>Definitions of Vegetation Strata:</b></p> <p><b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.</p> <p><b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.</p> <p><b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p><b>Woody vines</b> – All woody vines greater than 3.28 ft in height.</p> <p><b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>          </u></p>	

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mill Seat Landfill – South of existing footprint City/County: Riga, Monroe County Sampling Date: 8/13/13  
 Applicant/Owner: Waste Management / Monroe County State: NY Sampling Point: Wet RG-6 Forest

Investigator(s): Todd J. Phillips and Johanna E. Duffy Section, Township, Range: Town of Riga

Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave Slope (%): 2-3%

Subregion (LRR or MLRA): LRR-L Lat: 43° 03' 15.7" Long: 77° 56' 07.7" Datum: WGS 84

Soil Map Unit Name: Lakemont silt loam, loamy subsoil variant NWI classification: PFO

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes? X No \_\_\_\_\_

Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ Naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____	If yes, optional Wetland Site ID: <u>RG-6 Forest</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	<b>Secondary Indicators (minimum of two required)</b>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input checked="" type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> Marl Deposits (B15)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

<b>Field Observations:</b>	
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____	
Water Table Present Yes _____ No <u>X</u> Depth (inches): _____	
Saturation Present Yes _____ No <u>X</u> Depth (inches): _____	<b>Wetland Hydrology Present? Yes <u>X</u> No _____</b>
(includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 Aquatic snails present  
 Watermarks present – evidence of seasonal inundation



**VEGETATION** – Use scientific names of plants.

Sampling Point: Wet RG-6 Forest

Tree Stratum (Plot Size: 30-feet )	Absolute % Cover	Dominant Species?	Indicator Status		
1. <i>Fraxinus pennsylvanica</i>	10	No	FACW	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
2. <i>Acer saccharinum</i>	60	Yes	FACW		
3.					
4.					
5.					
6.					
7.					
	70	= Total Cover			
Sapling/Shrub Stratum (Plot Size: 30-feet )					
1. <i>Rhamnus cathartica</i>	2	No	FAC		
2. <i>Acer saccharinum</i>	20	Yes	FACW		
3.					
4.					
5.					
6.					
	22	= Total Cover			
Herb Stratum (Plot Size: 5-feet )				<b>Hydrophytic Vegetation Indicators:</b> _____ Rapid Test for Hydrophytic Vegetation X _____ Dominance Test is >50% _____ Prevalence Index is #3.0 <sup>1</sup> _____ Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
1. <i>Impatiens capensis</i>	5	Yes	FACW		
2. <i>Toxicodendron radicans</i>	3	Yes	FAC		
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
	8	= Total Cover			
Woody Vine Stratum: (Plot Size: 30-feet )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
1.					
2.					
3.					
4.					
5.					
6.					
7.					
		= Total Cover		<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____	
Remarks: (Include photo numbers here or on a separate sheet.)  Dominance of hydrophytic vegetation present within plot – dominance test completed					



# Appendix B

Wetland RG-7 Field Datasheets

August 13, 2013

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Mill Seat Landfill – O'Brien Road City/County: Riga, Monroe County Sampling Date: 8/13/13  
 Applicant/Owner: Mill Seat Landfill/Monroe County State: NY Sampling Point: Wet RG-7 South  
 Investigator(s): Todd J. Phillips and Johanna E. Duffy Section, Township, Range: Town of Riga, O'Brien Road  
 Landform (hillslope, terrace, etc.): Roadside slope Local relief (concave, convex, none): Concave Slope (%): 5%  
 Subregion (LRR or MLRA): LRR-L Lat: 43° 03' 17.8" Long: 77° 55' 23.4" Datum: WGS 84  
 Soil Map Unit Name: Wampsville cobbly loam, 8-15% slopes, Edwards Muck also in wetland NWI classification: PSS/PFO  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes?  No   
 Are Vegetation , Soil , or Hydrology  Naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		If yes, optional Wetland Site ID: <u>RG-7 South</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

Upland adjacent area is mowed road shoulder.

### HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes  No  Depth (inches):  
 Water Table Present Yes  No  Depth (inches): 14  
 Saturation Present Yes  No  Depth (inches): 14  
 (includes capillary fringe) Wetland Hydrology Present? Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Aquatic snails present  
 No soil saturation within 12-inches of surface  
 Indicators B13, C2, and D2 recorded at plot location



**VEGETATION** – Use scientific names of plants.

Sampling Point: Wet RG-7 South

Tree Stratum (Plot Size: 30-feet )	Absolute % Cover	Dominant Species?	Indicator Status		
1. <i>Acer saccharinum</i>	5	No	FACW	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71</u> (A/B)	
2. <i>Fraxinus pennsylvanica</i>	25	Yes	FACW		
3.					
4.					
5.					
6.					
7.					
	30	= Total Cover			
Sapling/Shrub Stratum (Plot Size: 30-feet )					
1. <i>Cornus stolonifera</i>	20	Yes	FACW		
2. <i>Lonicera tatarica</i>	10	Yes	FACU		
3. <i>Rhamnus cathartica</i>	3	No	FAC		
4.					
5.					
6.					
	33	= Total Cover			
Herb Stratum (Plot Size: 5-feet )				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is #3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
1. <i>Coptis trifolia</i>	5	Yes	FACW		
2. <i>Phragmites australis</i>	3	Yes	FACW		
3. <i>Aster sp.</i>	10	-	-		
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
	8	= Total Cover			
Woody Vine Stratum: (Plot Size: 30-feet )				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
1. <i>Vitis riparia</i>	7	Yes	FAC		
2. <i>Parthenocissus quinquefolia</i>	7	Yes	FACU		
3.					
4.					
5.					
6.					
	14	= Total Cover			
Remarks: (Include photo numbers here or on a separate sheet.)					
Dominance of hydrophytic vegetation present within plot – dominance test completed					

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: Mill Seat Landfill – O'Brien Road Turnaround City/County: Riga, Monroe County Sampling Date: 8/13/13  
 Applicant/Owner: Waste Management / Monroe County State: NY Sampling Point: wet RG-7 N  
 Investigator(s): Todd J. Phillips and Johanna E. Duffy Section, Township, Range: Town of Riga, O'Brien Road  
 Landform (hillslope, terrace, etc.): Roadside slope Local relief (concave, convex, none): Concave Slope (%): 5%

Subregion (LRR or MLRA): LRR-L Lat: 43° 03' 18.3" Long: 77° 55' 24.0" Datum: WGS 84  
 Soil Map Unit Name: Wampsville cobbly loam, 8-15% slopes, Edwards Muck also in wetland NWI classification: PEM/PSS  
 Are climatic/hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes?  No   
 Are Vegetation , Soil , or Hydrology  Naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Remarks: (Explain alternative procedures here or in a separate report.)  
  
 Upland vegetation on road shoulder consists of *Cichorium intybus* (FACU), *Ambrosia artemisiifolia* (FACU), *Oxalis stricta* (FACU), *Plantago major* (FACU), and *Clematis virginiana* (FAC).

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**  
 Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_  
 (includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
  
 Aquatic snails present  
 Evidence of seasonal saturation in plot location

**SOIL**

Sampling Point: Wet RG-7 N

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 3/1	100					Silty Clay Loam	
6-17	10YR 3/1	98	10YR 3/6	2	C	M	Silty Clay Loam	
17-20+	10YR 3/2	60	10YR 2/1	40	C	M	Silt Loam	Mixed Matrix

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L, M)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (BLRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox DarkSurface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Striped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b>  Type: <u>N/A</u> Depth (inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

Hydric soil indicator F6 met

**VEGETATION** – Use scientific names of plants.

Sampling Point: Wet RG-7 N

<i>Tree Stratum</i> (Plot Size: 30-feet )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Fraxinus pennsylvanica</i>	5	Yes	FACW	<b>Dominance Test Worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)	
2.						
3.						
4.						
5.						
6.						
7.						
		5	= Total Cover			
<i>Sapling/Shrub Stratum</i> (Plot Size: 30-feet )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Cornus stolonifera</i>	25	Yes	FACW	<b>Prevalence Index Worksheet:</b> Total % Cover of: <u>          </u> Multiply by: OBL species <u>          </u> x 1 = <u>          </u> FACW species <u>          </u> x 2 = <u>          </u> FAC species <u>          </u> x 3 = <u>          </u> FACU species <u>          </u> x 4 = <u>          </u> UPL species <u>          </u> x 5 = <u>          </u> Column Totals: <u>          </u> (A) <u>          </u> (B)  Prevalence Index = B/A = <u>          </u>	
2.						
3.						
4.						
5.						
6.						
7.						
		25	= Total Cover			
<i>Herb Stratum</i> (Plot Size: 5-feet )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Lycopus uniflorus</i>	5	No	OBL	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is #3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting Data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
2.	<i>Phragmites australis</i>	40	Yes	FACW		
3.	<i>Aster</i> sp.	5	No	-		
4.	<i>Solanum dulcamara</i>	10	No			
5.	<i>Clematis virginiana</i>	3	No			
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
		63	= Total Cover			
<i>Woody Vine Stratum:</i> (Plot Size: 30-feet )				Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Parthenocissus quinquefolia</i>	7	Yes	FAC	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
2.						
3.						
4.						
5.						
6.						
7.						
		7	= Total Cover			
<b>Hydrophytic Vegetation Present?</b> Yes <u>  X  </u> No <u>      </u>						

Remarks: (Include photo numbers here or on a separate sheet.)

Dominance of hydrophytic vegetation present within plot – dominance test completed