

C.T. MALE ASSOCIATES, P.C.

50 Century Hill Drive, Latham, NY 12110
518.786.7400 FAX 518.786.7299 ctmale@ctmale.com



October 21, 2009

VIA OVERNIGHT MAIL

Mr. Michael Mason, Project Engineer
New York State Department of Environmental Conservation
Division of Environmental Remediation, 12th Floor
625 Broadway
Albany, NY 12233-7011

RE: *Annual Monitoring Report for 2009 (Year 1)*
Former Bouchard Junkyard Waters of the U.S. Mitigation Area
Site No. 4-11-014 (RCC#D006282)
C.T. Male Project No. 08.8414



Dear Mr. Mason:

This report serves as the Year One Post-Construction Monitoring report for the Former Bouchard Junkyard Waters of the U.S. Mitigation Area, located along Route 20 in the Town of New Lebanon, Columbia County, New York. Pursuant to Section 02488 of the New York State Department of Environmental Conservation (NYSDEC) Contract Documents, this post-construction monitoring report is being submitted to the NYSDEC Project Engineer. The NYSDEC has issued a Remedial Design Work Assignment for the site under the State Superfund Standby Contract.

The goal of the Waters of the U.S. Mitigation is to remediate an existing wetland area contaminated when the site was formerly used as a junkyard. A Remedial Investigation (RI) was conducted between October 2001 and May 2002, and it was determined that the contaminated wetland soil would need to be removed. As mitigation for the past impacts, approximately 0.75 acres of forested wetlands were restored on the project site.

This report serves to fulfill the Post-Construction Monitoring Requirements within the NYSDEC-approved Wetland Restoration Area Monitoring Plan, and Section 02488 of the NYSDEC Former Bouchard Junkyard Contract Documents, which require the preparation of annual monitoring reports for a period of at least one (1) year. Pursuant to Section 02488, this report includes the following:

- Representative photographs of the Waters of the U.S. Restoration Area from each

1910 - 2010
years

C.T. MALE ASSOCIATES, P.C.

Mr. Michael Mason

October 21, 2009

Page 2

of the three (3) field visits.

- Four (4) Corps Data Forms (3 from the Waters of the U.S. Restoration Area and 1 from an undisturbed wetland area) characterizing vegetation, soils (including moisture content), and hydrology will be completed. Surface water levels will also be taken at each of the staff gauges (refer to Figure 1 - Former Bouchard Junkyard Wetland Restoration Area Monitoring Plan Data Point Location Map).
- A list of dominant plant species, including their relative percent cover in each vegetative strata (i.e., herbaceous, sapling, shrub, and tree), and regional indicator status for vegetation growing within the Waters of the U.S. Restoration Area.
- Assessment of the percent cover of purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*), bittersweet nightshade (*Solanum dulcamara*), garlic mustard (*Alliaria officinalis*), tree of heaven (*Ailanthus altissima*), multiflora rose (*Rosa multiflora*) and Japanese honeysuckle (*Lonicera japonica*) within the Waters of the U.S. Restoration Area and adjacent upland areas. If the combined coverage of invasive species is greater than 20%, the monitoring report will include an invasive species control plan.
- An estimate of the percent survivability of plantings within the Waters of the U.S. Restoration Area. The estimate will be based on data collected from two random (2) transects that will be walked within the Waters of the U.S. Restoration Area. Visual observations of the overall planting conditions will also be provided in the monitoring report.
- A collection and summary of meteorological/climatological data for the monitoring period.
- A sketch map depicting different ecological communities within the Waters of the U.S. Restoration Area. The sketch map will also show the location where information for each of the Corps Data Forms was collected (i.e., data points).
- Recommendations for remedial actions (i.e., supplemental plantings, invasive control, etc.), if necessary.

Field Methodology

Three (3) field reviews were conducted at the Waters of the U.S. Mitigation Area during the year one monitoring period; one during May/June, one during, one during July/ August and one during September/October. During the field reviews, visual observations were made and representative photographs were taken to document current conditions (refer to Attachment B, Representative Photographs). Additionally, data points were taken during the three (3) field reviews to characterize hydrology, vegetation and soils within the wetland and adjacent areas.

C.T. MALE ASSOCIATES, P.C.

Mr. Michael Mason

October 21, 2009

Page 3

Data forms were completed in accordance with 1987 Corps Methodology to characterize existing conditions within the Waters of the U.S. Mitigation Area (refer to Attachment C, Corps Data Forms). At each data point, trees and shrubs were identified in a 20-foot radius, and dominant herbaceous species were identified within a 10-foot radius plot. The relative percent cover of each dominant species was determined and recorded on the Corps data forms. Dominant plant species were evaluated in terms of their wetland indicator status according to "National List of Plant Species that Occur in Wetlands (Northeast)" (United States Fish and Wildlife Service, 1988).

Soils were sampled at each data point to a depth of approximately 12-inches. Soil colors were evaluated using a Munsell color chart, and indicators of hydric soils, such as gleyed or low chroma colors and mottles were identified. Wetland hydrology indicators such as inundation, stained leaf litter, drift lines, oxidized root channels and the presence of wetland drainage patterns were identified at each data point. Information on vegetation, soils and hydrology was used to make a wetland/non-wetland determination at each point.

Field Observations

Field visits of the Bouchard Junkyard waters of the U.S. mitigation area were conducted on June 18, 2009, August 6, 2009 and September 22, 2009 to characterize the existing conditions within the Waters of the U.S. Mitigation Area. Based on observations made during the field review, sketch maps were developed showing the approximate vegetative covertype boundaries within the Waters of the U.S. Mitigation Area (refer to Attachment D).

Observations during the three (3) visits indicated that the Waters of the U.S. Mitigation Area had nearly 86% total vegetative cover with herbaceous species, planted shrubs and trees. Within the wetland area, dominant herbaceous species included: ribbon grass (*Forma variegata*), deer tongue grass (*Panicum clandestinum*), bed straw (*Galium* sp.), moneywort (*Lysimachia nummularia*), lurid sedge (*Carex lurida*) and sensitive fern (*Onoclea sensibilis*).

During the June 18, 2009 field visit it was observed that the herbaceous stratum had not yet begun to vegetate throughout the mitigation area. Areas in which herbaceous vegetation were present were considered very sparsely covered.

During the August 6, 2009 field visit it was observed that vegetative growth had begun within the herbaceous stratum. Areas in which were previously sparsely vegetated by herbaceous vegetation were now thickly vegetated. The northern portion of the mitigation area continued to be sparsely vegetated with herbaceous vegetation.

C.T. MALE ASSOCIATES, P.C.

Mr. Michael Mason

October 21, 2009

Page 4

During the September 22, 2009 field visit it was observed that the herbaceous stratum had been established. The northern portion of the mitigation area continued to be sparsely vegetated with herbaceous vegetation. However, shrub and tree stratum were observed to be established in this area.

Wetland hydrology indicators observed within the mitigation area included inundated soils, water marks, sediment deposits, drainage patterns in wetlands, oxidized root channels in upper 12 inches and water stained leaves. The matrix color of the soils was observed to be of a low chroma color in the A and B horizons with mottles in the B-horizon (refer to Attachment C, Corps Data Forms).

Invasive Species

No common reed (*Phragmites australis*), bittersweet nightshade (*Solanum dulcamara*), garlic mustard (*Alliaria officinalis*), tree of heaven (*Ailanthus altissima*), multiflora rose (*Rosa multiflora*) Japanese honeysuckle (*Lonicera japonica*), or purple loosestrife (*Lythrum salicaria*) were observed in the mitigation area.

Photographs

Please refer to the attached photographs in Attachment B, which show representative photographs of the Waters of the U.S. Mitigation Area. The photographs from June 18, 2009 depict the wetland area after 1.52 inches of rain within the last 24 hours. The photographs from August 6, 2009 and September 22, 2009 depict the wetland area with no precipitation within the last 24 hours.

Meteorological/Climatological Data

Please refer to attached precipitation data provided in Attachment E, which displays the amount of rainfall in inches that has fallen in the vicinity of the mitigation area from June 18, 2009 through September 22, 2009. The majority of the precipitation for the 2009 growing season occurred in the month of July.

Sketch Maps

Attachment D contains sketch maps that show the estimated extent of vegetative covertypes within the mitigation area and the location of the data points that were studied.

C.T. MALE ASSOCIATES, P.C.

Mr. Michael Mason

October 21, 2009

Page 5

Plantings

Plantings in the mitigation area were to be placed in accordance with the following requirements as detailed in Section 02488 of the NYSDEC Former Bouchard Junkyard Contract Documents:

- Nursery grown trees should have no cuts of limbs that are not healing and can not exceed a length of $\frac{3}{4}$ of an inch that is not callused over and no abrasions or cut back crowns of the bark. The center leader must be intact on all major trees. Tops of deciduous trees should be well formed structurally with reasonably straight trunks and normal spread of crowns
- Deciduous trees must be 2" to 2 $\frac{1}{2}$ " caliper
- Evergreen trees and shrub species should be a minimum of 4 feet tall
- Shrubs should have good fibrous root systems

The following table provides a summary of the plantings installed within the Waters of the U.S. Area:

Table 1: Tree species installed:

Common Name	Scientific Name	Regional Wetland Indicator Status	# of trees
Balsam Fir	<i>Abies balsamea</i>	FAC	14
Red Maple	<i>Acer rubrum</i>	FAC, FACW	14
Sugar Maple	<i>Acer saccharum</i>	FACU	14
Paper Birch	<i>Betula papyrifera</i>	FACU	14
White Pine	<i>Pinus strobus</i>	FACU	14
Eastern Hemlock	<i>Tsuga canadensis</i>	FACU	15
American Elm	<i>Ulmus americana</i>	FACW	15

C.T. MALE ASSOCIATES, P.C.

Mr. Michael Mason

October 21, 2009

Page 6

Table 2: Shrub and vine species installed:

Common Name	Scientific Name	Regional Wetland Indicator Status	# of Plants
Speckled Alder	<i>Alnus regosa</i>	FACW	40
Red Osier Dogwood	<i>Cornus sericea (stolonifera)</i>	FACW	40
Winterberry Holly	<i>Ilex verticillata</i>	FACW	40
Elderberry	<i>Sambucus Canadensis</i>	FACW	40
Highbush Blueberry	<i>Vaccinium corymbosum</i>	FACW	40

Wetland indicators:

FACU: Facultative upland – predominantly occurs in nonwetlands, but are sometimes found in wetlands

FAC: Facultative – equal likelihood to occur in wetlands and nonwetlands

FACW: Facultative wetland – predominantly occurs in wetlands

Two (2) random transects were established in the Waters of the U.S. Area to determine the approximate survivability of shrub and tree plantings. Visual observations of the overall planting conditions were also made. Transects 1 and 2 were located in the Waters of the U.S. Area (refer to Attachment D for transect locations). In general, approximately 88% of the plantings were observed to be robust and in good condition.

Remedial Plan

The Waters of the U.S. Area was observed to have conditions indicative of wetland hydrology, hydrophytic vegetation, and hydric soil conditions. Invasive species were not observed within the Waters of the U.S. Mitigation Area. Planted shrubs and trees were observed to be in good condition and overall the wetland area were observed to be well vegetated. During the 2009 field reviews staff gauges were not observed in the wetland mitigation area. Staff gauges should be reinstalled and the elevation at the bottom and the top of the gauge should be surveyed (refer to Attachment F – Staff Gauge Location Map). Other than the reinstallation of staff gauges, no other remedial activities are recommended.

C.T. MALE ASSOCIATES, P.C.

Mr. Michael Mason
October 21, 2009
Page 7

Summary

Observations made during the 2009 growing season indicate that the mitigation area was constructed in accordance with the NYSDEC approved Waters of the U.S. Wetland Restoration Plan. Mitigation area was observed to have conditions indicative of wetland hydrology, including saturated soils. The wetland mitigation area was observed to be well vegetated and functioning as an emergent and scrub shrub wetland.

Should you have any question or comments regarding this project, please feel free to contact me or John Munsey at (518) 786-7400.

Sincerely,

C.T. MALE ASSOCIATES, P.C.



David J. Plante
Environmental Scientist & Planner III

c w/ attachments:
cc via E-Mail:

Scott Serviss (D.A. Collins)
John Munsey, Jeff Marx (C.T. Male)

C.T. MALE ASSOCIATES, P.C.

Attachment A
Proposed Waters of the U.S. Restoration
Monitoring Plan

BOUCHARD JUNKYARD PROPOSED WATERS OF THE U.S. RESTORATION MONITORING PLAN

D.A. Collins will undertake one (1) year of post-construction monitoring within the constructed Waters of the U.S. Restoration Area on the Bouchard Junkyard project site. Three (3) site visits (May/June, July/August & September/October), will be conducted in 2009 between May 15th and October 15th to review the Waters of the U.S. Restoration Area and collect field data. Six (6) copies of the post-construction monitoring report will be prepared and submitted to the NYSDEC Project Engineer by October 30th, 2009, pursuant to Section 01330 of the NYSDEC Contract Documents. This wetland monitoring plan has been prepared in accordance with Section 02488 of the Contract Documents and the Wetland Restoration Plan as prepared by Ecologic, LLC.

The annual monitoring report will contain the following information:

- Representative photographs of the Waters of the U.S. Restoration Area from each of the three (3) field visits.
- Four (4) Corps Data Forms (3 from the Waters of the U.S. Restoration Area and 1 from an undisturbed wetland area) characterizing vegetation, soils (including moisture content), and hydrology will be completed. Water levels will also be taken at each of the existing staff gauges (refer to Figure 1 - Former Bouchard Junkyard Wetland Restoration Area Monitoring Plan Data Point Location Map).
- A list of dominant plant species, including their relative percent cover in each vegetative strata (i.e., herbaceous, sapling, shrub, and tree), and regional indicator status for vegetation growing within the Waters of the U.S. Restoration Area.
- Assessment of the percent cover of purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*), bittersweet nightshade (*Solanum dulcamara*), garlic mustard (*Alliaria officinalis*), tree of heaven (*Ailanthus altissima*), multiflora rose (*Rosa multiflora*) and Japanese honeysuckle (*Lonicera japonica*) within the Waters of the U.S. Restoration Area and adjacent upland areas. If the combined coverage of invasive species is greater than 20%, the monitoring report will include an invasive species control plan.
- An estimate of the percent survivability of plantings within the Waters of the U.S. Restoration Area. The estimate will be based on data collected from two random (2) transects that will be walked within the Waters of the U.S. Restoration Area. Visual observations of the overall planting conditions will also be provided in the monitoring report.
- A collection and summary of meteorological/climatological data for the monitoring period.
- A sketch map depicting different ecological communities within the Waters of the U.S. Restoration Area. The sketch map will also show the location where information for each of the Corps Data Forms was collected (i.e., data points).
- Recommendations for remedial actions (i.e., supplemental plantings, invasive control, etc.), if necessary.

SECTION 02488

WETLAND RESTORATION

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope of Work:

1. The Contractor shall furnish all labor, materials, equipment, supplies and incidentals required for backfill, planting and restoration of impacted wetland areas, as specified herein, as shown on the Contract Drawings and as directed by the Engineer and the Department. This shall include, but is not limited to, restoration of the pre-excavation hydrologic regime, backfilling of areas in which greater than 6-inches of material has been excavated, and restoration of vegetation to develop a new forest canopy.
2. The Contractor shall prepare a wetland restoration report, documenting the final elevations and planting layout, as well as a summary of the corrective actions taken during restoration to address issues that may have occurred during the construction of the project. The report shall be submitted as a part of the final, as-built conditions submittal in accordance with Section 01050 – Field Engineering and Section 01330 – Project Submittals.
3. The Contractor shall prepare a wetland restoration monitoring plan, describing how the Contractor will monitor the success of the wetland restoration for a minimum of one year following final acceptance of the Work. This shall include, but is not limited to, collection of hydrologic data, collection of soils data in both disturbed and undisturbed areas, collection of vegetation data along established transects in spring (May-June), summer (July-August) and fall (September-October), collection and summary of local climatological data for the monitoring period, and monitoring for invasive species. The plan shall be prepared in accordance with the requirements specified in the "Wetland Restoration Plan for the former Bouchard Junkyard Site, New Lebanon, NY," as prepared by EcoLogic, LLC. A copy of the Restoration Plan is included as a part of the Limited Site Data Summary Report. The plan shall be submitted in accordance with Section 01330 – Project Submittals.

B. Related Work Specified Elsewhere:

1. Section 02112 – Excavation, Removal and Handling of PCB-Contaminated Material in Wetlands Area.
2. Section 02200 – Backfill and Compaction
3. Section 02487 – Planting

1.2 QUALITY ASSURANCE

- A. The Contractor shall retain the services of a qualified environmental wetlands subcontractor to conduct all wetland area planting, prepare the wetland restoration monitoring plan and conduct the long term monitoring. The environmental wetlands subcontractor shall have a minimum of five years experience performing substantially similar work. The Contractor may qualify as the environmental wetlands subcontractor if the Contractor can document the necessary experience.
- B. Reference Standards: Comply with applicable provisions and recommendation of the following, except as otherwise shown or specified.
1. ASTM D422, Particle Size Analysis of Soils.
- C. Tests for Backfill:
1. An independent testing laboratory shall be employed by the Contractor to perform the required tests.
 2. Required tests:
 - a. Grain size, ASTM D422
 - b. Total Organic Carbon (see Section 01652)
 - c. Bulk Density, ASTM D4531
 - d. Permeability, ASTM D5084
 - e. pH (see Section 01652)
 - f. Nutrient Analysis: Nitrogen and phosphorus (see Section 01652)

- g. Chemical Analysis: Target Compounds List (TCL) volatile organic compounds; TCL semivolatile organic compounds; TCL pesticides; TCL PCBs; Target Analyte List (TAL) metals and cyanide. Sample collection and analysis shall be in accordance with the Contractor's approved Sampling and Analysis Plan (see Section 01652).

C. Planting: General

1. Reference Standards: Comply with applicable provisions and recommendations of the following, except where otherwise shown or specified.
 - ANSI Z60.1, American Standard for Nursery Stock
 - Association of Official Analytical Chemists, Official Methods of Analysis
 - American Joint Committee on Horticultural Nomenclature, Standardized Plant Names

B. Nomenclature:

1. The common and scientific names of plants shall be in conformity with the approved names by Standardized Plant Names prepared by the American Joint Committee on Horticultural Nomenclature 1942 Edition or its successor as the American Association of Nurserymen's recognized authority on Botanical Nomenclature.

C. Standards:

1. Plants including root spread and ball size shall be in accordance with the current edition of "American Standard for Nursery Stock," a code of standards sponsored by the American Nursery and Landscape Association as modified herein and as otherwise specified.

D. Inspection:

1. All trees shall be subject to inspection and approval of the Department at the growing site, but approval and marking at the growing site shall not obligate the Department to pay for any tree or shrub until it has been delivered and planted at the planting site in a satisfactory condition. At least 10 days prior to digging and shipment of the trees from the growing site, the Contractor shall notify the Engineer. The removal of nursery stock rejected at the planting site and its replacement in compliance with specifications shall be made at no extra cost to the Department.

2. All plants shall be subject to inspection at any place and at anytime. The Contractor shall be represented at all inspections.

1.3 SUBMITTALS

- A. Submit the following in accordance with Section 01330 – Project Submittals:

1. Independent Testing Laboratory: Prior to conducting the required tests, the Contractor shall submit, to the Engineer, for approval, the name of the independent testing laboratory which will facilitate the required testing.

2. Samples and Test Results:

- a. At least 2 weeks prior to the date of anticipated use, the Contractor shall submit, to the Engineer, for approval, a representative samples of all off-site materials required. The Contractor shall notify the Engineer in writing of the source of each sample.
- b. The Contractor shall provide, along with the above samples, the required test results.

- B. Shop Drawings: 10 copies of the following shall be submitted to the Engineer for review and approval:

1. Planting schedule showing scheduled dates for all planting work.
2. Manufacturer's or suppliers Specifications and installation instructions for all materials required.
3. Certificates from tree vendors for each species stating botanical and common name for each species.
4. Tree and shrub planting details, as prepared by the environmental wetland restoration subcontractor, for each wetland species type specified (see 2.2(B)). This should include all details and requirements for ground preparation, plant setting, size of pits, staking, guying or anchoring, mulching, fertilizing, and watering.

1.4 CERTIFICATIONS

- A. The Contractor shall be responsible for all certificates of inspection of trees which may be required by federal, state or other authority to accompany

shipment of trees. Certificates of Inspection shall be submitted to the Engineer for each shipment of plants at delivery.

- B. Labeling shall be in accordance with normal nursery labeling practice except that the Contractor shall be required at any time to supply certification of positive identification of any plant species and/or variety in addition to those specified herein.
- C. The Contractor shall submit certificates of material compliance before delivery of each type of fertilizer and the anti-desiccant to be supplied.

PART 2 – PRODUCTS

2.1 FILL MATERIAL

A. General:

- 1. The Contractor shall comply with the general requirements for all fill materials, as stated under Section 02200 – Backfill and Compaction, Part 2, Paragraph 2.1.

B. Soil Materials:

- 1. Fill materials should be selected to match the specified guidelines:

<u>Characteristic</u>	<u>Guideline</u>
Grain size, bulk density, permeability, total organic carbon	Within the range of the mean $\pm$ the standard deviation of baseline measurements
pH, nutrients (nitrogen and phosphorus)	Within the maximum and minimum range of baseline measurements
2. The Contractor shall not be required to pre-characterize the wetland areas as a part of the Work. Contractor will be provided with baseline measurements from the Engineer and/or the Department prior to the wetland restoration work.	

2.2 PLANTS

A. General:

- 1. The Contractor shall comply with all requirements for plants, as stated under Section 02487 – Planting, Part 2, Paragraph 2.1, with the exception of Item E.

B. Trees and Shrubs:

1. Where ordered by the Engineer to replace a tree with a facultative wetland (FACW) species type, the Contractor shall furnish 2-inch to 2-1/2 inch caliper trees, B&B or C.G. and of Specimen Quality from the following approved list:
 - a. Acer rubrum
 - b. Ulmus americana
 - c. Alnus rugosa
 - d. Cornus sericea (stolonifera)
 - e. Ilex verticillata
 - f. Sambucus Canadensis
 - g. Vaccinium corymbosum
2. Where ordered by the Engineer to replace a tree with a facultative (FAC) species type, the Contractor shall furnish 2-inch to 2-1/2 inch caliper trees, B&B or C.G. and of Specimen Quality from the following approved list:
 - a. Abies balsamea
 - b. Acer rubrum
3. Where ordered by the Engineer to replace a tree with a facultative upland (FACU) species type, the Contractor shall furnish 2-inch to 2-1/2 inch caliper trees, B&B or C.G. and of Specimen Quality from the following approved list:
 - a. Acer saccharum
 - b. Betula papyrifera
 - c. Pinus strobus
 - d. Tsuga Canadensis
4. The species and potting of planting for each area shall be specified by the Engineer during construction. The selection will be based on

conformity to existing area planting, availability of species, and pre-excavation baseline hydrology, soil and vegetation measurements.

5. Nursery grown trees shall have no cuts of limbs which are not healing and no cuts over 3/4 inch which have not completely callused over, no cut back crowns and no abrasions of the bark. The center leader on all major trees shall be intact. Trees must have good fibrous root systems characteristic of the kind. The tops of deciduous trees shall be well formed structurally with reasonably straight trunks and normal spread of crowns.
6. Bare root trees shall not require earth adhering to the roots except as required for puddling.
7. Balled and burlapped trees shall be properly dug and protected to preserve the natural earth in contact with the roots. No manufactured balls will be accepted. The balls shall be of the required size, firmly wrapped and tied with minimum three (3) ply sisal or equal. No balled tree will be acceptable if the ball is cracked or broken.
8. Balled and platformed trees shall be balled as specified for (B&B) trees. Platforms shall be square or octagonal shaped of a size slightly larger than the diameter of the bottom of the soil mass inserted under each ball by means of ties from the platform corners to the rope collar on top of the ball.
9. The quality of balled and burlapped shrubs shall be as specified for (B&B) trees herein. Shrubs shall have good fibrous root systems.
10. Trees shall be a minimum of 4 feet tall.

2.3 WATER

- A. Water shall be from fresh water sources and free from soil, acids, alkalis, salt or any other substance injurious to plant growth. The Contractor shall be required to obtain the Department's approval of the Source of Water to be used.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Contractor shall provide the Engineer with sufficient time and means to examine the areas and conditions under which backfilling and planting are to

be performed. Work shall not proceed until all unsatisfactory conditions have been corrected in a manner acceptable to the Engineer.

3.2 BACKFILL

- A. Contractor shall backfill excavation areas as promptly as Work permits, but not until acceptance by the Engineer of all Work within the excavation areas, including approval of endpoint sampling results.
- B. Contractor shall only backfill excavations areas in which the total depth of excavation was greater than 6-inches. Areas excavated to a total depth of only 6-inches will not require backfill.
- C. Contractor shall not backfill depressions left from the removal of trees and their associated roots in areas in which the total depth of excavation was only 6-inches.

3.3 HYDROLOGY

- A. Contractor shall restore stream channels impacted by the excavation within the wetland areas, as shown on the Contract Drawings. Streams shall be restored to the original elevation, stream course, channel width, channel depth, and gradient that was present prior to conducting excavation activities, as directed by the Department and the Engineer.

3.4 PLANTING

- A. All planting within the areas of the wetland shall only be conducted by the environmental wetland restoration subcontractor, as approved by the Engineer and the Department.
- B. Trees and shrubs within the wetland areas shall be planted in accordance with the Contract Drawings and with the following planting requirements:
 - 1. Areas with a final elevation of less than 686 feet amsl shall be planted with 100% FACW type trees and shrubs.
 - 2. Areas with a final elevation of 686 to 687 feet amsl shall be planted with a mix of 70% FACW and 30% FAC type trees and shrubs.
 - 3. Areas with a final elevation of 687 to 688 feet amsl shall be planted with a mix of 30% FACW and 70% FAC type trees and shrubs.
 - 4. Areas with a final elevation of greater than 688 feet amsl shall be planted with a mix of 50% FAC and 50% FACU type trees and shrubs.

5. Or as approved by the Engineer.
- C. Trees and shrubs planted within the 100-foot wetland buffer zone shall be in accordance with Section 02487 – Planting
- D. One tree and two shrubs shall be planted for every 400 square feet of excavated wetland area. Locations shall be randomly selected within each 400 square foot area and shall not be located in a row. The distance between trees shall not be less than 10 feet and the distance between shrubs shall not be less than 5 feet.
- E. Final locations for all plants shall be staked to the satisfaction of the Engineer before any trees or shrubs are planted.
- F. The Contractor shall be held responsible for the proper location of each tree and shrub. Any species of tree planted in the wrong location shall be replaced with a new tree in the next succeeding planting season.
- G. All requirements for ground preparation, plant setting and care of plants shall be in accordance with the environmental wetland restoration subcontractor's submitted shop drawings.

3.5 CARE OF PLANTS

- A. Care of Plants Prior to Satisfactory Completion of Planting:
1. The Contractor shall care for the planting which shall consist of keeping all plants in a healthy growing condition by watering, weeding, cultivating, pruning, spraying, tightening of guys, remulching and any other necessary operations as required until satisfactory completion of planting.
 2. All plants shall be watered at least once a week between April 1 and October 1 unless otherwise directed by the Engineer, until satisfactory completion of planting. Each watering shall provide not less than five gallons per square yard on plant pits and bed areas.
 3. All dead and rejected plants shall be promptly removed from the contract site. In the event of the threat of serious damage from insects, diseases or rodents, the plants shall be treated by preventive or remedial measures currently approved for good horticultural practice. In the event "heeled-in" material must be held over until a later planting season, such "heeled-in" material shall be lifted, replanted and maintained in a satisfactory condition in nursery rows. Such emergency storage and maintenance shall be at the entire risk of the Contractor and at no cost to the Department. The land for such

storage shall be provided for by the Contractor unless otherwise specified or approved.

4. Grass and weed growth shall be removed from all plant pits and planting beds as directed by the Engineer. Prior to final acceptance of the planting, the outer portions of tree pit saucers and all other disturbed areas, excluding planting beds, shall have acceptable evidence of grass growth unless otherwise directed by the Engineer. Seed used for this purpose shall be as specified under Section "Seeding" of this Specification or as approved by the Engineer.

B. Replacement Prior to Satisfactory Completion of Planting:

1. At the conclusion of the essential portion of the planting work, all plants in an unhealthy or badly impaired condition, in the opinion of the Engineer, shall be removed. All planting to be completed or replaced shall be planted not later than the next succeeding planting season.

C. Final Inspection:

1. When, in the opinion of the Contractor, the planting is complete and ready for final inspection, he shall notify the Engineer who will arrange to give the entire work a thorough inspection. Before final payment will be made, any dead plants, defects or omissions noted on this inspection must be rectified by the Contractor.

3.6 PERIOD OF ESTABLISHMENT

A. Guarantee:

1. The Contractor shall guarantee the life of all plants for a period of one (1) year after the Engineer has made his final inspection and the planting has been confirmed in writing by the Engineer as having been satisfactorily completed. Any plant which is damaged, destroyed, or dies from whatever cause except theft or vandalism during the above period shall be replaced no later than the next succeeding planting season as specified upon written notice to the Contractor from the Engineer. Plants that have died during the period of establishment shall be replaced and shall be guaranteed for an additional year.

B. Care of Plants and Replacement During Period of Establishment:

1. Due to planting seasons, the Contractor shall be required to replace any damaged, destroyed or dead plant within the two (2) planting

seasons during the "Period of Establishment" which may entail replacing the same plant twice after satisfactory completion of planting.

2. The Contractor shall be responsible for all work required to care for the plants properly and make necessary replacements during the period of establishment, including watering, mulching, pruning, restaking and replanting. He shall maintain during this period a sufficient labor force at all time to care for the plants in a proper manner and perform all necessary operations efficiently and expeditiously.
3. The Contractor shall be required to water all plant material a minimum of six (6) times during the period of establishment. Each plant shall receive five (5) gallons of water for each square yard of pit area. Watering shall be performed when plants are in active vegetative growth. If in the opinion of the Engineer unseasonable dry conditions exist, additional watering may be required as directed by the Engineer.
4. At the end of the "Period of Establishment" the Contractor shall remove and dispose of all stakes, wire, hose, and tree trunk wrapping from all trees as directed by the Engineer. All holes left due to removal of stakes shall be filled with topsoil. All of the above work shall be performed at no additional cost to the Department.

+ + END OF SECTION + +

C.T. MALE ASSOCIATES, P.C.

Attachment B

Representative Photographs

C.T. MALE ASSOCIATES, P.C.

**First Semi-Annual Field Visit
June 18, 2009**

REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – June 18, 2009



View southeast of wetland mitigation area from monitoring well #4.



View northeast of wetland mitigation area from monitoring well #4.



REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – June 18, 2009



View northeast of wetland mitigation area from data point #1.



View southeast of wetland mitigation area from data point #1.

REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – June 18, 2009



View north of wetland mitigation area from southwestern boundary corner.



View east of wetland mitigation area from northwest boundary corner.



REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – June 18, 2009



View north of wetland mitigation area from data point #3.



View south of rip-rap area entering wetland mitigation area.



REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – June 18, 2009



View southwest of wetland mitigation area from data point #4.



View south of wetland mitigation area from data point #4.



REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – June 18, 2009



View east from corner of gravel parking area.



Second Semi-Annual Field Visit
August 6, 2009

REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – August 6, 2009



View northeast of wetland mitigation area from corner of gravel parking lot.



View south of wetland mitigation area from monitoring well #4.



REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – August 6, 2009



View north of wetland mitigation area from southwestern project corner.



View south of wetland mitigation area / rock lined channel (rip-rap).



REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – August 6, 2009



View west of wetland mitigation area from data point #4.



View west of wetland mitigation area from data point #3.



REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – August 6, 2009



View north of wetland mitigation area from data point #3.



View east of wetland mitigation area from data point #2.



REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – August 6, 2009



View west of wetland mitigation area from data point #2.



**Third Semi-Annual Field Visit
September 22, 2009**

REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – September 22, 2009



View northeast of wetland mitigation area from corner of gravel parking lot.



View south of wetland mitigation area from monitoring well #4.

REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – September 22, 2009



View north of wetland mitigation area from southwestern project corner.



View north of upland transitional area from just north of monitoring well #4.

REPRESENTATIVE PHOTOGRAPHS
Former Bouchard Junkyard – September 22, 2009



View south of wetland
mitigation area/rock lined channel (rip-rap).



View west of wetland mitigation area from data point #4.

REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – September 22, 2009



View west of wetland mitigation area from data point #3.



View north of wetland mitigation area from data point #3.

REPRESENTATIVE PHOTOGRAPHS

Former Bouchard Junkyard – September 22, 2009



View east of wetland mitigation area from data point #2.



View west of wetland mitigation area from data point #2.

C.T. MALE ASSOCIATES, P.C.

Attachment C Corps Data Forms

C.T. MALE ASSOCIATES, P.C.

**First Semi-Annual Field Visit
June 18, 2009**

ROUTINE USACOE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Bouchard Junk Yard</u>	CTM Proj #: <u>08.8414</u>	Date: <u>6/18/07</u>
Applicant/Owner: <u>P.A. Collins</u>		County/State: <u>Columbia, NY</u>
Do Normal Circumstances exist on the site?	☒ Yes ☐ No	Wetland#: <u>Din. Pair 2</u>
Is the site significantly disturbed (Atypical situation)?	☐ Yes ☒ No	Classification: <u>Scrub-Shrub</u>
Is the area a potential Problem Area?	☐ Yes ☒ No	Data Point #: <u>DP1</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Speckled Alder	7%	Shrub	FACW+	6. Ribbon Grass	30% herb FACW
2. Winterberry Holly	6%	Shrub	FACW+	7. Deer Tongue Grass	25% herb FAC+
3. Red Maple	3%	Tree	FAC	8.	
4. Highbush Blueberry	4%	Shrub	FACW-	9.	
5. Elderberry	5%	Shrub	FAC	10.	
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-):			<u>>50%</u>		

HYDROLOGY

Recorded Data Available?	☐ Yes ☐ No	(Describe in Report)
Wetland Hydrology Indicators:		
Primary Indicators:		
☒ Inundated	Depth of Standing Water: <u>~2</u> (in.)	Secondary Indicators (2 or more required):
☐ Saturated in Upper 12"	Depth of Saturated Soil: <u>—</u> (in.)	☒ Oxidized Root Channels in Upper 12 Inches
☒ Water marks	☒ Sediment Deposits	☒ Water-Stained Leaves
☐ Drift Lines	☒ Drainage Patterns in Wetlands	☐ Local Soil Survey Data
		☒ FAC-Neutral Test
		☐ Other (Explain in Remarks)

SOILS

Map Unit Name: _____	Listed as Hydric Soil: ☐ Yes ☐ No				
Profile Description:					
Depth Inches	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-4"	A	10YR 3/1	—	—	Organic silt
4-12"	B	10YR 3/3	10YR 4/2	Common	Silty clay
Hydric Soil Indicators:					
☒ Organic Soils			☐ Concretions		
☒ Sandy Soils			☒ Gleyed or Low-Chroma Colors		
☐ High Organic Content in Surface Layer			☐ Sulfidic Odor		
☐ Organic Streaking			☐ Other:		

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒ Yes ☐ No	Is this Sampling Point Within a Wetland?	☒ Yes ☐ No
Wetland Hydrology Present?	☒ Yes ☐ No	Isolated Wetland? If so, fill out Supplemental Form A	☐
Hydric Soils Present?	☒ Yes ☐ No	Linear Waters of the U.S.? If so, fill out Supplemental Form B	☐
Remarks (i.e., describe wetland functions and indicate if the area has the potential as T&E habitat):			
<u>Stormwater drainage</u>			

Investigator: KRP

ROUTINE USACOE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Bouchnal Junk Yard</u>		CTM Proj #: <u>02.8414</u>	Date: <u>6/18/09</u>
Applicant/Owner: <u>D.A. Collins</u>		County/State: <u>Columbia, NY</u>	
Do Normal Circumstances exist on the site?	☒ Yes ☐ No	Wetland#: <u>Data Point 2</u>	
Is the site significantly disturbed (Atypical situation)?	☐ Yes ☒ No	Classification: <u>Emergent</u>	
Is the area a potential Problem Area?	☐ Yes ☒ No	Data Point #: <u>DP2</u>	

VEGETATION

VEGETATION							
Dominant Plant Species		Stratum	Indicator	Dominant Plant Species		Stratum	Indicator
1. Red Maple	6%	Tree	FAC	6. bedstraw	15%	herb	FACW-
2. Turbid Sedge	15%	herb	OBL	7. moneywort	10%	herb	OBL
3. Speckled Alder	3%	Shrub	FACW+	8.			
4. Sensitive Fern	35%	Herb	FACW	9.			
5. Silver Maple	4%	Tree	FACW+	10.			
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).				> 50%			

HYDROLOGY

Recorded Data Available? ☐ Yes ☐ No (Describe in Report)	
Wetland Hydrology Indicators:	
Primary Indicators:	Secondary Indicators (2 or more required):
☒ Inundated	Depth of Standing Water: <u>~5</u> (in.)
☐ Saturated in Upper 12"	Depth of Saturated Soil: <u>—</u> (in.)
☒ Water marks	☐ Oxidized Root Channels in Upper 12 Inches
☒ Sediment Deposits	☒ Water-Stained Leaves
☐ Drift Lines	☐ Local Soil Survey Data
☒ Drainage Patterns in Wetlands	☒ FAC-Neutral Test
	☐ Other: (Explain in Remarks)

SOILS

Map Unit Name: _____		Listed as Hydric Soil: ☐ Yes ☐ No			
Profile Description:					
Depth Inches	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-3"	A	10YR 3/1			Organic Silt
3-12"	B	10YR 3/2	10YR 3/4	common	Silty Sandy Loam
Hydric Soil Indicators:					
☒ Organic Soils					
☒ Sandy Soils					
☐ High Organic Content in Surface Layer					
☐ Organic Streaking					
☐ Concretions					
☒ Gleyed or Low-Chroma Colors					
☐ Sulfidic Odor					
☐ Other:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒ Yes ☐ No	Is this Sampling Point Within a Wetland?	☒ Yes ☐ No
Wetland Hydrology Present?	☒ Yes ☐ No	Isolated Wetland? If so, fill out Supplemental Form A	☐
Hydric Soils Present?	☒ Yes ☐ No	Linear Waters of the U.S.? If so, fill out Supplemental Form B	☐

Remarks (i.e., describe wetland functions and indicate if the area has the potential as T&E habitat):

- Stormwater drainage
- very well established herbaceous vegetation system

Investigator: KRP

ROUTINE USACOE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Bouchar's Junk Yard</u>	CTM Proj #: <u>08.8414</u>	Date: <u>6/18/09</u>
Applicant/Owner: <u>D.A. Collins</u>	County/State: <u>Columbia, NY</u>	
Do Normal Circumstances exist on the site?	☒ Yes ☐ No	Wetland#: <u>Data Point 3</u>
Is the site significantly disturbed (Atypical situation)?	☐ Yes ☒ No	Classification: <u>Scrib-Shrub</u>
Is the area a potential Problem Area?	☐ Yes ☒ No	Data Point #: <u>DP3</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. White Pine	2% Tree	FACU	6. Mallow	15% herb	OBL
2. Winterberry Holly	5% Shrub	FACW+	7. Red Osier Dogwood	8% Shrub	FACW+
3. Speckled Alder	7% Shrub	FACW+	8.		
4. Elderberry	10% Shrub	FAC	9.		
5. Sensitive Fern	20% herb	FACW	10.		
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).			> 50%		

HYDROLOGY

Recorded Data Available?	☐ Yes ☐ No	(Describe in Report)
Wetland Hydrology Indicators:		
Primary Indicators:		
☒ Inundated	Depth of Standing Water: <u>~ 5</u> (in.)	☒ Oxidized Root Channels in Upper 12 Inches
☐ Saturated in Upper 12"	Depth of Saturated Soil: <u>—</u> (in.)	☒ Water-Stained Leaves
☒ Water marks	☒ Sediment Deposits	☐ Local Soil Survey Data
☐ Drift Lines	☐ Drainage Patterns in Wetlands	☒ FAC-Neutral Test
		☐ Other (Explain in Remarks)

SOILS

Map Unit Name:	Listed as Hydric Soil: ☐ Yes ☐ No				
Profile Description:					
Depth Inches	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-8"	A	10YR2/1	—	—	Organic Silt
8-22"	B	10YR3/1	10YR3/3	distinct	Silty Clay
Hydric Soil Indicators:					
☒ Organic Soils			☐ Concretions		
☒ Sandy Soils			☒ Gleyed or Low-Chroma Colors		
☐ High Organic Content in Surface Layer			☐ Sulfidic Odor		
☐ Organic Streaking			☐ Other:		

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒ Yes ☐ No	Is this Sampling Point Within a Wetland?	☒ Yes ☐ No
Wetland Hydrology Present?	☒ Yes ☐ No	Isolated Wetland? If so, fill out Supplemental Form A	☐
Hydric Soils Present?	☒ Yes ☐ No	Linear Waters of the U.S.? If so, fill out Supplemental Form B	☐
Remarks (i.e., describe wetland functions and indicate if the area has the potential as T&E habitat):			
- Stormwater drainage			

Investigator: KRP

ROUTINE USACOE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Boulevard Junk Yard</u>	CTM Proj #: <u>08.8414</u>	Date: <u>6/18/07</u>
Applicant/Owner: <u>D.A. Collins</u>		County/State: <u>Columbia, NY</u>
Do Normal Circumstances exist on the site?	☒ Yes ☐ No	Wetland#: <u>Data Point 4</u>
Is the site significantly disturbed (Atypical situation)?	☐ Yes ☒ No	Classification: <u>scrub-shrub</u>
Is the area a potential Problem Area?	☐ Yes ☒ No	Data Point #: <u>DP4</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Elderberry	5% Shrub	FAC	6. bedstraw	15% herb	FACW+
2. Sensitive Fern	25% herb	FACW	7. Spotted Aster	5% Shrub	FACW+
3. Inland Sedge	35% herb	OBL	8.		
4. Red Osier Dogwood	4% Shrub	FACW+	9.		
5. Red Maple	2% Tree	FAC	10.		
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).			<u>>50%</u>		

HYDROLOGY

Recorded Data Available?	☐ Yes ☐ No	(Describe in Report)
Wetland Hydrology Indicators:		
Primary Indicators:		Secondary Indicators (2 or more required):
☒ Inundated	Depth of Standing Water: <u>~3</u> (in.)	☒ Oxidized Root Channels in Upper 12 Inches
☐ Saturated in Upper 12"	Depth of Saturated Soil: <u>—</u> (in.)	☒ Water-Stained Leaves
☒ Water marks	☒ Sediment Deposits	☐ Local Soil Survey Data
☐ Drift Lines	☒ Drainage Patterns in Wetlands	☒ FAC-Neutral Test
		☐ Other (Explain in Remarks)

SOILS

Map Unit Name: _____	Listed as Hydric Soil: ☐ Yes ☐ No				
Profile Description:					
Depth Inches	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-5"	A	10YR2/2	—	—	Organic Silt
5-12"	B	10YR3/2	10YR3/4	Few	Silty Clay
Hydric Soil Indicators:					
☒ Organic Soils			☐ Concretions		
☒ Sandy Soils			☒ Gleyed or Low-Chroma Colors		
☐ High Organic Content in Surface Layer			☐ Sulfidic Odor		
☐ Organic Streaking			☐ Other:		

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒ Yes ☐ No	Is this Sampling Point Within a Wetland?	☒ Yes ☐ No
Wetland Hydrology Present?	☒ Yes ☐ No	Isolated Wetland? If so, fill out Supplemental Form A	☐
Hydric Soils Present?	☒ Yes ☐ No	Linear Waters of the U.S.? If so, fill out Supplemental Form B	☐
Remarks (i.e., describe wetland functions and indicate if the area has the potential as T&E habitat):			
<u>Stagnant Drainage</u>			

Investigator: KRP

C.T. MALE ASSOCIATES, P.C.

**Second Semi-Annual Field Visit
August 6, 2009**

ROUTINE USACOE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Burchard Junkyard</u>	CTM Proj #: <u>08.8414</u>	Date: <u>8/6/09</u>
Applicant/Owner: <u>D.A. Collins</u>		County/State: <u>Columbia NY</u>
Do Normal Circumstances exist on the site?	☒ Yes ☐ No	Wetland#: <u>Data Point 1</u>
Is the site significantly disturbed (Atypical situation)?	☐ Yes ☒ No	Classification: <u>Scrub-shrub</u>
Is the area a potential Problem Area?	☐ Yes ☒ No	Data Point #: <u>DP1</u>

VEGETATION

Dominant Plant Species		Stratum	Indicator	Dominant Plant Species		Stratum	Indicator
1. Red Osier Dogwood	10%	Shrub	FACW+	6. Deer Tongue grass	20%	Herb	FAC+
2. Speckled Alder	8%	Shrub	FACW+	7.			
3. Highbush blueberry	6%	Shrub	FACW-	8.			
4. Elderberry	5%	Shrub	FAC	9.			
5. Ribbon grass	25%	Herb	FACW	10.			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).	>50%
---	------

HYDROLOGY

Recorded Data Available?	☐ Yes ☐ No	(Describe in Report)
Wetland Hydrology Indicators:		
Primary Indicators:		
☒ Inundated	Depth of Standing Water: <u>24</u> (in.)	☐ Oxidized Root Channels in Upper 12 Inches
☐ Saturated in Upper 12"	Depth of Saturated Soil: <u>---</u> (in.)	☒ Water-Stained Leaves
☒ Water marks	☒ Sediment Deposits	☐ Local Soil Survey Data
☐ Drift Lines	☒ Drainage Patterns in Wetlands	☒ FAC-Neutral Test
		☐ Other: (Explain in Remarks)

SOILS

Map Unit Name: _____	Listed as Hydric Soil: ☐ Yes ☐ No				
Profile Description:					
Depth Inches	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-10"	A	10YR2/1	---	---	Organic silt
10-12"	B	10YR3/1	10YR3/3	common	sandy clay
Hydric Soil Indicators:					
☒ Organic Soils			☐ Concretions		
☒ Sandy Soils			☒ Gleyed or Low-Chroma Colors		
☐ High Organic Content in Surface Layer			☐ Sulfidic Odor		
☐ Organic Streaking			☐ Other:		

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒ Yes ☐ No	Is this Sampling Point Within a Wetland?	☒ Yes ☐ No
Wetland Hydrology Present?	☒ Yes ☐ No	Isolated Wetland? If so, fill out Supplemental Form A	☐
Hydric Soils Present?	☒ Yes ☐ No	Linear Waters of the U.S.? If so, fill out Supplemental Form B	☐

Remarks (i.e., describe wetland functions and indicate if the area has the potential as T&E habitat):

stormwater drainageInvestigator: KRP

ROUTINE USACOE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Bowchard Junk Yard</u>	CTM Proj #: <u>08.8414</u>	Date: <u>8-6-09</u>
Applicant/Owner: <u>D.A. Collins</u>		County/State: <u>Columbia, NY</u>
Do Normal Circumstances exist on the site?	☒ Yes ☐ No	Wetland #: <u>Data Point 2</u>
Is the site significantly disturbed (Atypical situation)?	☐ Yes ☒ No	Classification: <u>emergent</u>
Is the area a potential Problem Area?	☐ Yes ☒ No	Data Point #: <u>DP2</u>

VEGETATION

Dominant Plant Species		Stratum	Indicator	Dominant Plant Species		Stratum	Indicator
1. Red Maple	8%	Tree	FAC	6. Sensitive Fern	15%	herb	FACW
2. Silver Maple	4%	Tree	FACW+	7.			
3. Red Osier Dogwood	12%	Shrub	FACW+	8.			
4. Spotted Alder	6%	Shrub	FACW+	9.			
5. Waterhemp	20%	herb	FACW-	10.			
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).				>50%			

HYDROLOGY

Recorded Data Available?	☐ Yes ☐ No	(Describe in Report)
Wetland Hydrology Indicators:		
Primary Indicators:		
☒ Inundated	Depth of Standing Water: <u>~6</u> (in.)	Secondary Indicators (2 or more required):
☐ Saturated in Upper 12"	Depth of Saturated Soil: <u>~1000</u> (in.)	☐ Oxidized Root Channels in Upper 12 Inches
☐ Water marks	☒ Sediment Deposits	☒ Water-Stained Leaves
☐ Drift Lines	☒ Drainage Patterns in Wetlands	☐ Local Soil Survey Data
		☒ FAC-Neutral Test
		☐ Other (Explain in Remarks)

SOILS

Map Unit Name: _____	Listed as Hydric Soil: ☐ Yes ☐ No				
Profile Description:					
Depth Inches	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-8"	A	10YR3/1	—	—	Organic silt
8-12"	B	10YR3/3	10YR4/2	common	Sandy silt
Hydric Soil Indicators:					
☒ Organic Soils			☐ Concretions		
☒ Sandy Soils			☒ Gleyed or Low-Chroma Colors		
☐ High Organic Content in Surface Layer			☐ Sulfidic Odor		
☐ Organic Streaking			☐ Other:		

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒ Yes ☐ No	Is this Sampling Point Within a Wetland?	☒ Yes ☐ No
Wetland Hydrology Present?	☒ Yes ☐ No	Isolated Wetland? If so, fill out Supplemental Form A	☐
Hydric Soils Present?	☒ Yes ☐ No	Linear Waters of the U.S.? If so, fill out Supplemental Form B	☐

Remarks (i.e., describe wetland functions and indicate if the area has the potential as T&E habitat):

- Stormwater drainage

- Area where data point was taken has achieved 80% vegetative r/c, established herbaceous layer

Investigator: KRP

ROUTINE USACOE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Boulevard Junk Yard</u>	CTM Proj #: <u>08.8414</u>	Date: <u>8/6/09</u>
Applicant/Owner: <u>P.A. Collins</u>	County/State: <u>Columbia, NY</u>	
Do Normal Circumstances exist on the site?	☒ Yes ☐ No	Wetland#: <u>Data Point 3</u>
Is the site significantly disturbed (Atypical situation)?	☐ Yes ☒ No	Classification: <u>Scrub-shrub</u>
Is the area a potential Problem Area?	☐ Yes ☒ No	Data Point #: <u>DP3</u>

VEGETATION

Dominant Plant Species		Stratum	Indicator	Dominant Plant Species		Stratum	Indicator
1. Red Maple	4%	Tree	FAC	6. Highbush blueberry	6%	Shrub	FACW-
2. White Pine	2%	Tree	FACU	7. Money wort	4%	herb	OBL
3. Red Osier Dogwood	14%	Shrub	FACW+	8.			
4. Sackled Alder	10%	Shrub	FACW+	9.			
5. Elderberry	8%	Shrub	FAC	10.			
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).				>50%			

HYDROLOGY

Recorded Data Available?	☐ Yes ☐ No	(Describe in Report)
Wetland Hydrology Indicators:		
Primary Indicators:		
☒ Inundated	Depth of Standing Water: <u>~4</u> (in.)	Secondary Indicators (2 or more required):
☐ Saturated in Upper 12"	Depth of Saturated Soil: <u>—</u> (in.)	☒ Oxidized Root Channels in Upper 12 Inches
☐ Water marks	☒ Sediment Deposits	☒ Water-Stained Leaves
☐ Drift Lines	☒ Drainage Patterns in Wetlands	☐ Local Soil Survey Data
		☒ FAC-Neutral Test
		☐ Other (Explain in Remarks)

SOILS

Map Unit Name:	Listed as Hydric Soil: ☐ Yes ☐ No				
Profile Description:					
Depth Inches	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-7"	A	10YR3/2	—	—	Organic silt
7-12"	B	10YR4/1	10YR4/3	common	Silty Sand
Hydric Soil Indicators:					
☒ Organic Soils			☐ Concretions		
☒ Sandy Soils			☒ Gleyed or Low-Chroma Colors		
☐ High Organic Content in Surface Layer			☐ Sulfidic Odor		
☐ Organic Streaking			☐ Other:		

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒ Yes ☐ No	Is this Sampling Point Within a Wetland?	☒ Yes ☐ No
Wetland Hydrology Present?	☒ Yes ☐ No	Isolated Wetland? If so, fill out Supplemental Form A	☐
Hydric Soils Present?	☒ Yes ☐ No	Linear Waters of the U.S.? If so, fill out Supplemental Form B	☐
Remarks (i.e., describe wetland functions and indicate if the area has the potential as T&E habitat):			
<u>- stormwater drainage</u>			

Investigator: KRP

ROUTINE USACOE WETLAND DETERMINATION DATA FORM

Project/Site: <u>Boulevard Junk Yard</u>	CTM Proj #: <u>08.8414</u>	Date: <u>8-6-09</u>
Applicant/Owner: <u>D.A. Collins</u>		County/State: <u>Columbia, MS</u>
Do Normal Circumstances exist on the site?	☒ Yes ☐ No	Wetland#: <u>DP# 2-4</u>
Is the site significantly disturbed (Atypical situation)?	☐ Yes ☒ No	Classification: <u>Scrub-shrub</u>
Is the area a potential Problem Area?	☐ Yes ☒ No	Data Point #: <u>DP4</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator		
1. Red Maple	2%	Tree	FAC	6. Lurid Sedge	30%	Sub	OBL
2. Red Osier Dogwood	12%	Shrub	FACW+	7. Redstart	10%	Sub	FACW-
3. Winterberry Holly	10%	Shrub	FACW+	8.			
4. Spotted Alder	8%	Shrub	FACW+	9.			
5. Elderberry	8%	Shrub	FAC	10.			
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).			<u>>50%</u>				

HYDROLOGY

Recorded Data Available?	☐ Yes ☐ No	(Describe in Report)
Wetland Hydrology Indicators:		
Primary Indicators:		
☒ Inundated	Depth of Standing Water: <u>~8</u> (in.)	Secondary Indicators (2 or more required):
☐ Saturated in Upper 12"	Depth of Saturated Soil: <u>~</u> (in.)	☒ Oxidized Root Channels in Upper 12 Inches
☐ Water marks	☒ Sediment Deposits	☒ Water-Stained Leaves
☐ Drift Lines	☒ Drainage Patterns in Wetlands	☐ Local Soil Survey Data
		☒ FAC-Neutral Test
		☐ Other (Explain in Remarks)

SOILS

Map Unit Name:	Listed as Hydric Soil: ☐ Yes ☐ No				
Profile Description:					
Depth Inches	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-10"	A	10YR 2/2	—	—	Organic Silt
10-12"	B	10YR 3/1	10YR 3/3	few	Silty Clay
Hydric Soil Indicators:					
☒ Organic Soils			☐ Concretions		
☒ Sandy Soils			☒ Gleyed or Low-Chroma Colors		
☐ High Organic Content in Surface Layer			☐ Sulfidic Odor		
☐ Organic Streaking			☐ Other:		

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	☒ Yes ☐ No	Is this Sampling Point Within a Wetland?	☒ Yes ☐ No
Wetland Hydrology Present?	☒ Yes ☐ No	Isolated Wetland? If so, fill out Supplemental Form A	☐
Hydric Soils Present?	☒ Yes ☐ No	Linear Waters of the U.S.? If so, fill out Supplemental Form B	☐
Remarks (i.e., describe wetland functions and indicate if the area has the potential as T&E habitat):			
<u>Stormwater drainage</u>			

Investigator:

KRP

C.T. MALE ASSOCIATES, P.C.

**Third Semi-Annual Field Visit
September 22, 2009**

ROUTINE USACOE WETLAND DETERMINATION DATA FORM

Project/Site: Bouchard Junkyard CTM Proj #: 08.8414 Date: 9/22/09
 Applicant/Owner: D.A. Collins County/State: Columbia, NY

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? ☐ Yes ☒ No

Wetland#: Data Point 1
 Classification: Scrub Shrub
 Data Point #: DP 1

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Deer Tongue Grass 25%	herb	FAC+	6. White Pine 5%	Tree	FACU
2. Ribbon Grass 30%	herb	FACW	7. Winterberry Holly 6%	Shrub	FACW+
3. Red Osier Dogwood 8%	Shrub	FACW+	8.		
4. Speckled Alder 10%	Shrub	FACW+	9.		
5. Highbush Blueberry 3%	Shrub	FACW-	10.		
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).			<u>>50%</u>		

HYDROLOGY

Recorded Data Available? ☐ Yes ☐ No (Describe in Report)

Wetland Hydrology Indicators:

Primary Indicators:

☒ Inundated Depth of Standing Water: ~5 (in.)
☐ Saturated in Upper 12" Depth of Saturated Soil: _____ (in.)

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 Inches
☒ Water-Stained Leaves
☐ Local Soil Survey Data
☒ FAC-Neutral Test
☐ Other (Explain in Remarks)

☒ Water marks ☐ Sediment Deposits
☐ Drift Lines ☒ Drainage Patterns in Wetlands

SOILS

Map Unit Name: _____ Listed as Hydric Soil: ☐ Yes ☐ No

Profile Description:

Depth Inches	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-10"	A	10YR 2/1	—	—	Organic silt
10-12"	B	10YR 3/1	10YR 4/2	common	Silty clay

Hydric Soil Indicators: ☒ Organic Soils ☐ Concretions
☒ Sandy Soils ☒ Gleyed or Low-Chroma Colors
☐ High Organic Content in Surface Layer ☐ Sulfidic Odor
☐ Organic Streaking ☐ Other:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No
 Wetland Hydrology Present? ☒ Yes ☐ No
 Hydric Soils Present? ☒ Yes ☐ No

Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
 Isolated Wetland? If so, fill out Supplemental Form A ☐
 Linear Waters of the U.S.? If so, fill out Supplemental Form B ☐

Remarks (i.e., describe wetland functions and indicate if the area has the potential as T&E habitat):

- Stormwater drainage

Investigator: JLM

ROUTINE USACOE WETLAND DETERMINATION DATA FORM

Project/Site: Bouchard Junk Yard CTM Proj #: 08.8414 Date: 9/22/09
 Applicant/Owner: D.A. Collins County/State: Columbia, NY

Do Normal Circumstances exist on the site? ☒ Yes ☐ No Wetland#: Data Point 2
 Is the site significantly disturbed (Atypical situation)? ☐ Yes ☒ No Classification: Emergent
 Is the area a potential Problem Area? ☐ Yes ☒ No Data Point #: DP2

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Sensitive fern	30%	Herb FACW	6. Red Osier Dogwood	12%	Shrub FACW+
2. Bed straw	25%	Herb FACW-	7. Catails	10%	Herb OBL
3. Red Maple	6%	Tree FAC	8.		
4. Silver Maple	3%	Tree FACW+	9.		
5. Speckled Alder	5%	Shrub FACW+	10.		
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).			<u>> 50%</u>		

HYDROLOGY

Recorded Data Available? ☐ Yes ☐ No (Describe in Report)

Wetland Hydrology Indicators:

Primary Indicators:

☒ Inundated Depth of Standing Water: ~6 (in.)
☐ Saturated in Upper 12" Depth of Saturated Soil: _____ (in.)

☐ Water marks ☒ Sediment Deposits
☐ Drift Lines ☒ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 Inches
☒ Water-Stained Leaves
☐ Local Soil Survey Data
☒ FAC-Neutral Test
☐ Other (Explain in Remarks)

SOILS

Map Unit Name: _____ Listed as Hydric Soil: ☐ Yes ☐ No

Profile Description:

Depth Inches	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-6"	A	10YR 3/1	—	—	organic silt
6-12"	B	10YR 3/3	10YR 4/2	common	sandy silt

Hydric Soil Indicators: ☒ Organic Soils ☐ Concretions
☒ Sandy Soils ☒ Gleyed or Low-Chroma Colors
☐ High Organic Content in Surface Layer ☐ Sulfidic Odor
☐ Organic Streaking ☐ Other:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No
 Wetland Hydrology Present? ☒ Yes ☐ No
 Hydric Soils Present? ☒ Yes ☐ No

Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
 Isolated Wetland? If so, fill out Supplemental Form A ☐
 Linear Waters of the U.S.? If so, fill out Supplemental Form B ☐

Remarks (i.e., describe wetland functions and indicate if the area has the potential as T&E habitat):

- stormwater drainage
- well vegetated herbaceous layer

Investigator: JLM

ROUTINE USACOE WETLAND DETERMINATION DATA FORM

Project/Site: Bouchard Junk Yard CTM Proj #: 08.8414 Date: 9/22/09
 Applicant/Owner: D.A. Collins County/State: Columbia, NY

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? ☐ Yes ☒ No

Wetland#: Data Point 3
 Classification: Scrub-Shrub
 Data Point #: DP3

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Elderberry	10%	Shrub	FAC	6. Red Oiser Dogwood	15% Shrub FACW-
2. Sensitive fern	20%	Shrub	FACW-	7. Speckled Alder	6% Shrub FACW+
3. White Pine	2%	Tree	FACU	8.	
4. Money wort	15%	Herb	OBL	9.	
5. Red Maple	3%	Tree	FAC	10.	
Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-).			<u>> 50 %</u>		

HYDROLOGY

Recorded Data Available? ☐ Yes ☐ No (Describe in Report)

Wetland Hydrology Indicators:

Primary Indicators:

☒ Inundated Depth of Standing Water: ~5 (in.)
☐ Saturated in Upper 12" Depth of Saturated Soil: _____ (in.)

Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 Inches
☒ Water-Stained Leaves
☐ Local Soil Survey Data
☒ FAC-Neutral Test
☐ Other (Explain in Remarks)

☐ Water marks ☒ Sediment Deposits
☐ Drift Lines ☒ Drainage Patterns in Wetlands

SOILS

Map Unit Name: _____ Listed as Hydric Soil: ☐ Yes ☐ No

Profile Description:

Depth Inches	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-8	A	10YR 3/2	—	—	organic silt
8-12	B	10YR 4/2	10YR 4/3	common	silty clay

Hydric Soil Indicators: ☒ Organic Soils ☐ Concretions
☒ Sandy Soils ☒ Gleyed or Low-Chroma Colors
☐ High Organic Content in Surface Layer ☐ Sulfidic Odor
☐ Organic Streaking ☐ Other:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No
 Wetland Hydrology Present? ☒ Yes ☐ No
 Hydric Soils Present? ☒ Yes ☐ No

Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
 Isolated Wetland? If so, fill out Supplemental Form A ☐
 Linear Waters of the U.S.? If so, fill out Supplemental Form B ☐

Remarks (i.e., describe wetland functions and indicate if the area has the potential as T&E habitat):

- stormwater drainage

Investigator: JLM

ROUTINE USACOE WETLAND DETERMINATION DATA FORM

Project/Site: Bouchard Junk Yard CTM Proj #: 08.8414 Date: 9/22/09
 Applicant/Owner: D.A. Collins County/State: Columbia, NY

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? ☐ Yes ☒ No

Wetland#: Data Point 4
 Classification: Scrub-Shrub
 Data Point #: DP4

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Lurid Sedge</u>	<u>30%</u>	<u>Herb</u>	<u>OBL</u>	6. <u>Elduberry</u>	<u>5%</u> <u>Shrub</u> <u>FAC</u>
2. <u>Red Oiser Dogwood</u>	<u>10%</u>	<u>Shrub</u>	<u>FACW-</u>	7. <u>sensitive fern</u>	<u>25%</u> <u>Herb</u> <u>FACW</u>
3. <u>Red Straw</u>	<u>10%</u>	<u>Herb</u>	<u>FACW-</u>	8. <u>Winterberry Holly</u>	<u>5%</u> <u>Shrub</u> <u>FACW+</u>
4. <u>Speckled Alder</u>	<u>5%</u>	<u>Shrub</u>	<u>FACW+</u>	9.	
5. <u>Red Maple</u>	<u>2%</u>	<u>tree</u>	<u>FAC</u>	10.	

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). > 50%

HYDROLOGY

Recorded Data Available? ☐ Yes ☐ No (Describe in Report)

Wetland Hydrology Indicators:

Primary Indicators:

☒ Inundated Depth of Standing Water: ~7 (in.)
☐ Saturated in Upper 12" Depth of Saturated Soil: _____ (in.)

☐ Water marks ☒ Sediment Deposits
☐ Drift Lines ☒ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☒ Oxidized Root Channels in Upper 12 Inches
☐ Water-Stained Leaves
☐ Local Soil Survey Data
☒ FAC-Neutral Test
☐ Other (Explain in Remarks)

SOILS

Map Unit Name: _____ Listed as Hydric Soil: ☐ Yes ☐ No

Profile Description:

Depth Inches	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
<u>0-8"</u>		<u>10YR 2/1</u>	<u>—</u>	<u>—</u>	<u>organic silt</u>
<u>8-12"</u>		<u>10YR 3/1</u>	<u>10YR 3/3</u>	<u>Common</u>	<u>silty clay</u>

Hydric Soil Indicators: ☒ Organic Soils ☐ Concretions
☒ Sandy Soils ☒ Gleyed or Low-Chroma Colors
☐ High Organic Content in Surface Layer ☐ Sulfidic Odor
☐ Organic Streaking ☐ Other:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? ☒ Yes ☐ No
 Wetland Hydrology Present? ☒ Yes ☐ No
 Hydric Soils Present? ☒ Yes ☐ No

Is this Sampling Point Within a Wetland? ☒ Yes ☐ No
 Isolated Wetland? If so, fill out Supplemental Form A ☐
 Linear Waters of the U.S.? If so, fill out Supplemental Form B ☐

Remarks (i.e., describe wetland functions and indicate if the area has the potential as T&E habitat):

- stormwater drainage

Investigator:

JLM

C.T. MALE ASSOCIATES, P.C.

Attachment D Sketch Maps

C.T. MALE ASSOCIATES, P.C.

**First Semi-Annual Field Visit
June 18, 2009**

UNAUTHORIZED ALTERATION OR ADDITION TO
THIS DOCUMENT IS A VIOLATION OF SECTION
7209 SUBDIVISION 2 OF THE NEW YORK STATE
EDUCATION LAW.

Map Notes:

1. Data points are approximate and dependent upon actual field conditions during monitoring visits (i.e. areas of deep inundation and no vegetation will be avoided when field locating data points).

Map References:

1. "As-Built Topographic Survey, N.Y.S. Department of Environmental Conservation Remediation Site No. 4-11-014 Former Bouchard Junkyard, New Lebanon, Columbia County, New York, prepared by Clark Engineering & Surveying dated 1/20/2009.

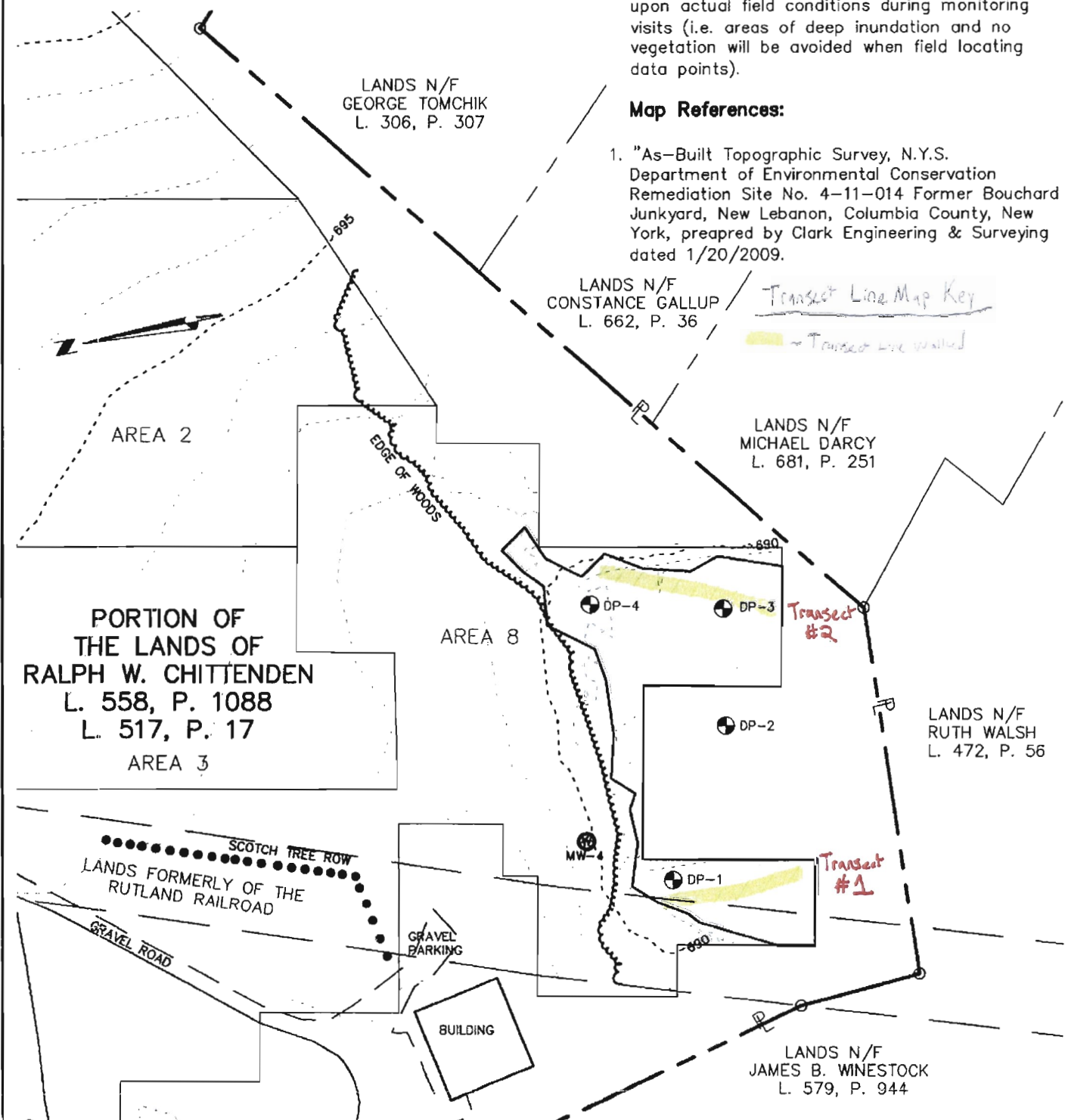


FIGURE 1

DATA POINT LOCATION MAP WETLAND RESTORATION AREA MONITORING PLAN FORMER BOUCHARD JUNKYARD

NEW LEBANON

COLUMBIA COUNTY, NEW YORK

C.T. MALE ASSOCIATES, P.C.

50 CENTURY HILL DRIVE, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299

Architecture & Building Systems Engineering * Civil Engineering
Environmental Services * Survey & Land Information Services



Date	RECORD OF WORK	Appr.
Drafter: SMW	Checker:	
Appr. by:	Proj. No. 08.8414	

SCALE: 1"=100'

DATE: FEBRUARY 6, 2009

CAD DWG. FILE NAME: WETLAND RESTORATION AREA.DWG

Map Notes:

1. Data points are approximate and dependent upon actual field conditions during monitoring visits (i.e. areas of deep inundation and no vegetation will be avoided when field locating data points).

Map References:

1. "As-Built Topographic Survey, N.Y.S.
Department of Environmental Conservation
Remediation Site No. 4-11-014 Former Bouchard
Junkyard, New Lebanon, Columbia County, New
York, prepared by Clark Engineering & Surveying
dated 1/20/2009.

LANDS N/F
GEORGE TOMCHIK
L. 306, P. 307

LANDS N/F
CONSTANCE GALLUP
L. 662, P. 36

LANDS N/F
MICHAEL DARCY
1. 681 2. 251

LANDS N/F
RUTH WALSH
L. 472, P. 56

LANDS N/F
JAMES B. WINESTOCK
L. 579, P. 944

AREA 2

PORTION OF
THE LANDS OF
RALPH W. CHITTENDEN
L. 558, P. 1088
L. 517, P. 17
AREA 3

~~AREA 8~~

SCOTCH TREE ROW
LANDS FORMERLY OF THE
RUTLAND RAILROAD

GRAVEL
BARKING

BUILDING

LANDS N/F
RUTH WALSH
L. 472, P. 56

LANDS N/F
JAMES B. WINESTOCK
L. 579, P. 944

Date	RECORD OF WORK	Appr.
Drafter: SMW	Checker:	
Appr. by:	Proj. No. 08.8414	

FIGURE 1
DATA POINT LOCATION MAP
WETLAND RESTORATION AREA MONITORING PLAN
FORMER BOUCHARD JUNKYARD

NEW LEBANON

COLUMBIA COUNTY, NEW YORK

C.T. MALE ASSOCIATES, P.C.

50 CENTURY HILL DRIVE, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299

Architecture & Building Systems Engineering * Civil Engineering
Environmental Services * Survey & Land Information Services

SCALE: 1"=100'

DATE: FEBRUARY 6, 2009



C.T. MALE ASSOCIATES, P.C.

**Second Semi-Annual Field Visit
August 6, 2009**

NONE XREFS

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

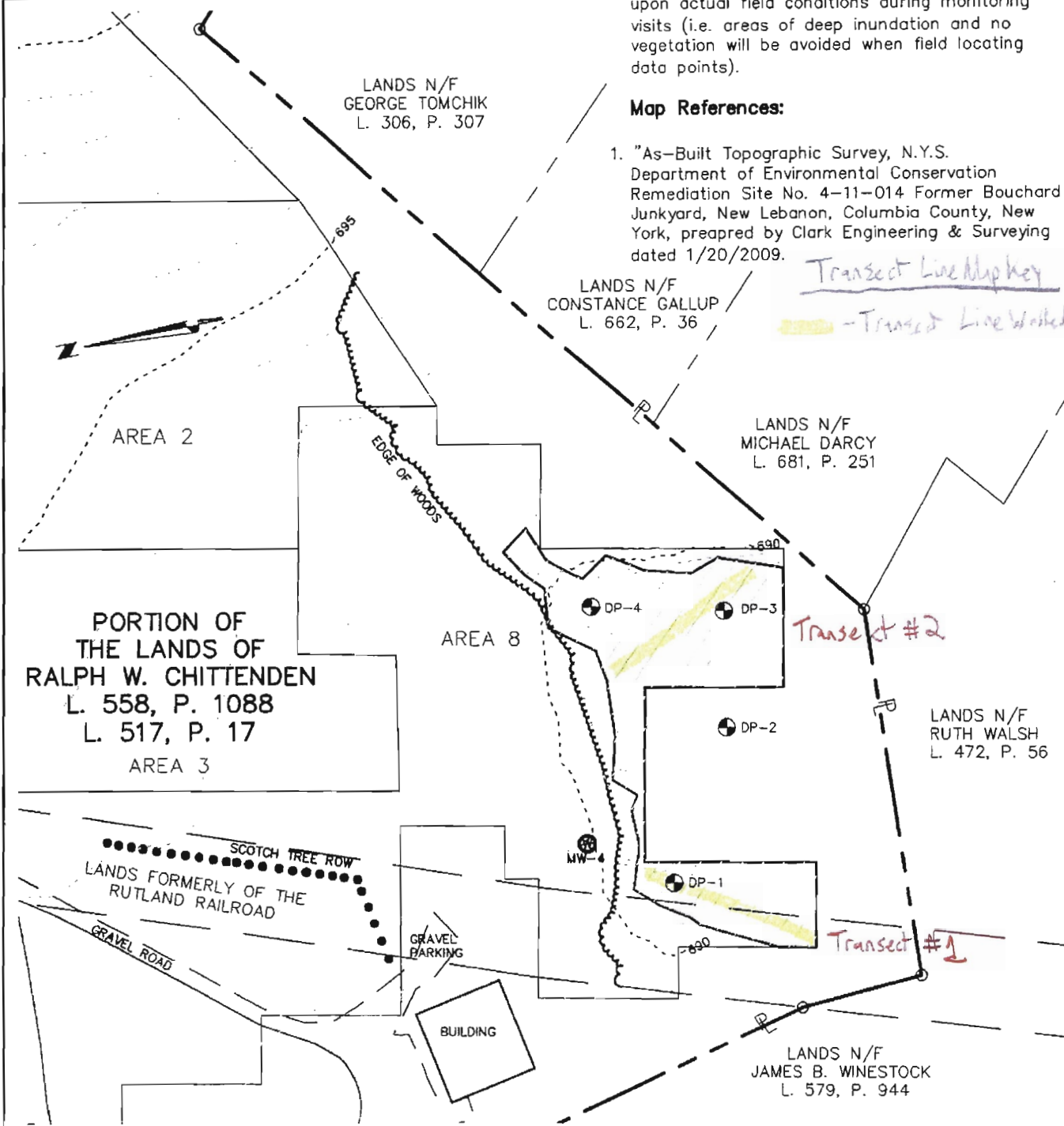
Map Notes:

1. Data points are approximate and dependent upon actual field conditions during monitoring visits (i.e. areas of deep inundation and no vegetation will be avoided when field locating data points).

Map References:

1. "As-Built Topographic Survey, N.Y.S. Department of Environmental Conservation Remediation Site No. 4-11-014 Former Bouchard Junkyard, New Lebanon, Columbia County, New York, prepared by Clark Engineering & Surveying dated 1/20/2009.

Transect Line Map Key
-Transect Line Walked



CAD DWG. FILE NAME: WETLAND RESTORATION AREA.DWG

Date	RECORD OF WORK	Appr.	FIGURE 1 DATA POINT LOCATION MAP WETLAND RESTORATION AREA MONITORING PLAN FORMER BOUCHARD JUNKYARD NEW LEBANON COLUMBIA COUNTY, NEW YORK C.T. MALE ASSOCIATES, P.C. 50 CENTURY HILL DRIVE, LATHAM, NY 12110 518.786.7400 * FAX 518.786.7299 Architecture & Building Systems Engineering * Civil Engineering Environmental Services * Survey & Land Information Services	
Drafter: SMW	Checker:		SCALE: 1"=100'	DATE: FEBRUARY 6, 2009
Appr. by:	Proj. No. 08.8414			

NONE :XREFS

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

Map Notes:

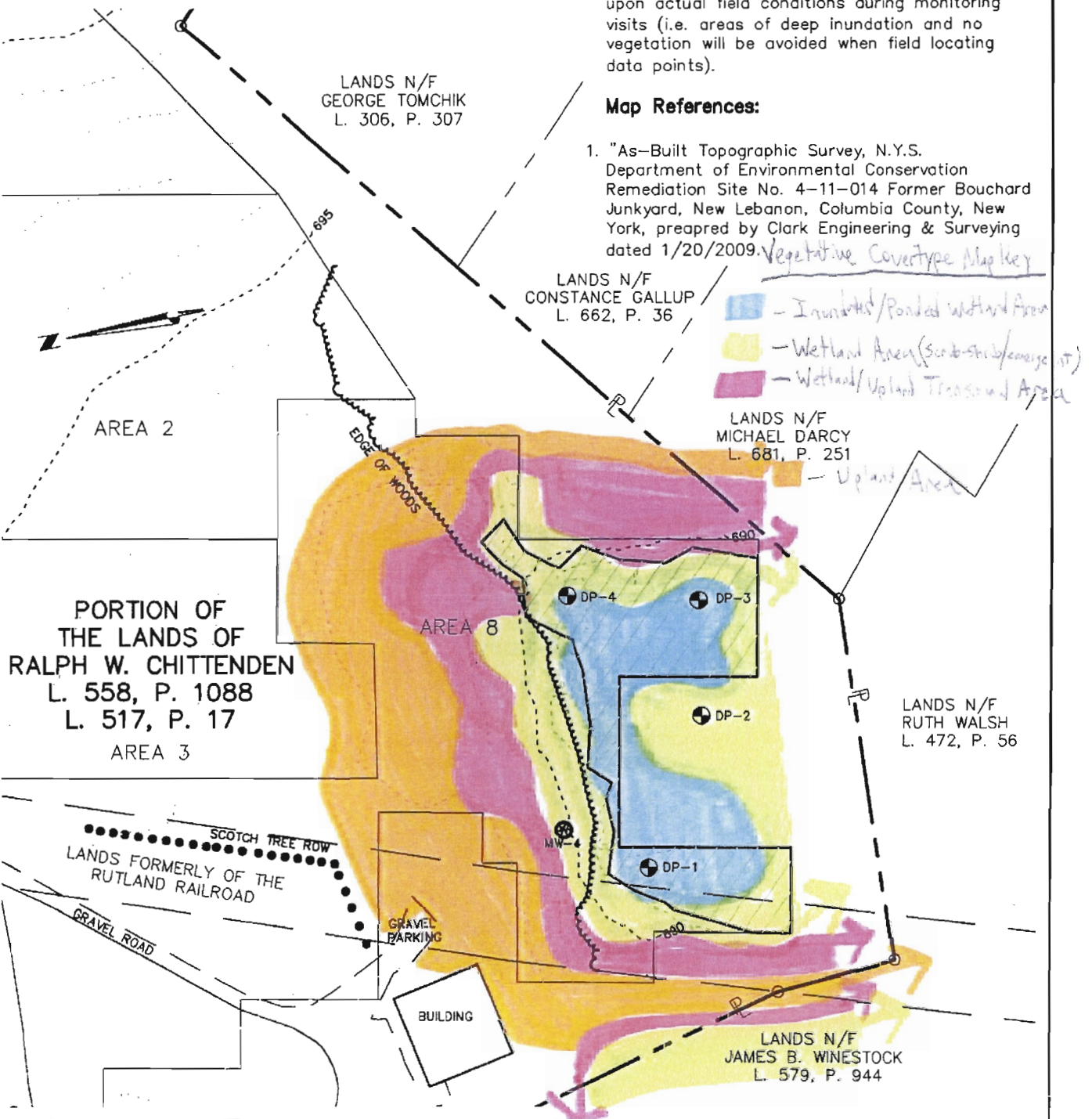
1. Data points are approximate and dependent upon actual field conditions during monitoring visits (i.e. areas of deep inundation and no vegetation will be avoided when field locating data points).

Map References:

1. "As-Built Topographic Survey, N.Y.S. Department of Environmental Conservation Remediation Site No. 4-11-014 Former Bouchard Junkyard, New Lebanon, Columbia County, New York, prepared by Clark Engineering & Surveying dated 1/20/2009."

Vegetative Covertype Map Key

- Inundated/Ponded Wetland Area
- Wetland Area (Scrub-shrub/emergent)
- Wetland/Upland Transition Area
- Upland Area



CAD DWG. FILE NAME: WETLAND RESTORATION AREA.DWG

Date	RECORD OF WORK	Appr.	FIGURE 1 DATA POINT LOCATION MAP WETLAND RESTORATION AREA MONITORING PLAN FORMER BOUCHARD JUNKYARD NEW LEBANON COLUMBIA COUNTY, NEW YORK C.T. MALE ASSOCIATES, P.C. 50 CENTURY HILL DRIVE, LATHAM, NY 12110 518.786.7400 * FAX 518.786.7299 Architecture & Building Systems Engineering * Civil Engineering Environmental Services * Survey & Land Information Services	
Drafter: SMW	Checker:			
Appr. by:	Proj. No. 08.8414		SCALE: 1"=100' DATE: FEBRUARY 6, 2009	

C.T. MALE ASSOCIATES, P.C.

**Third Semi-Annual Field Visit
September 22, 2009**

NONE AREES

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

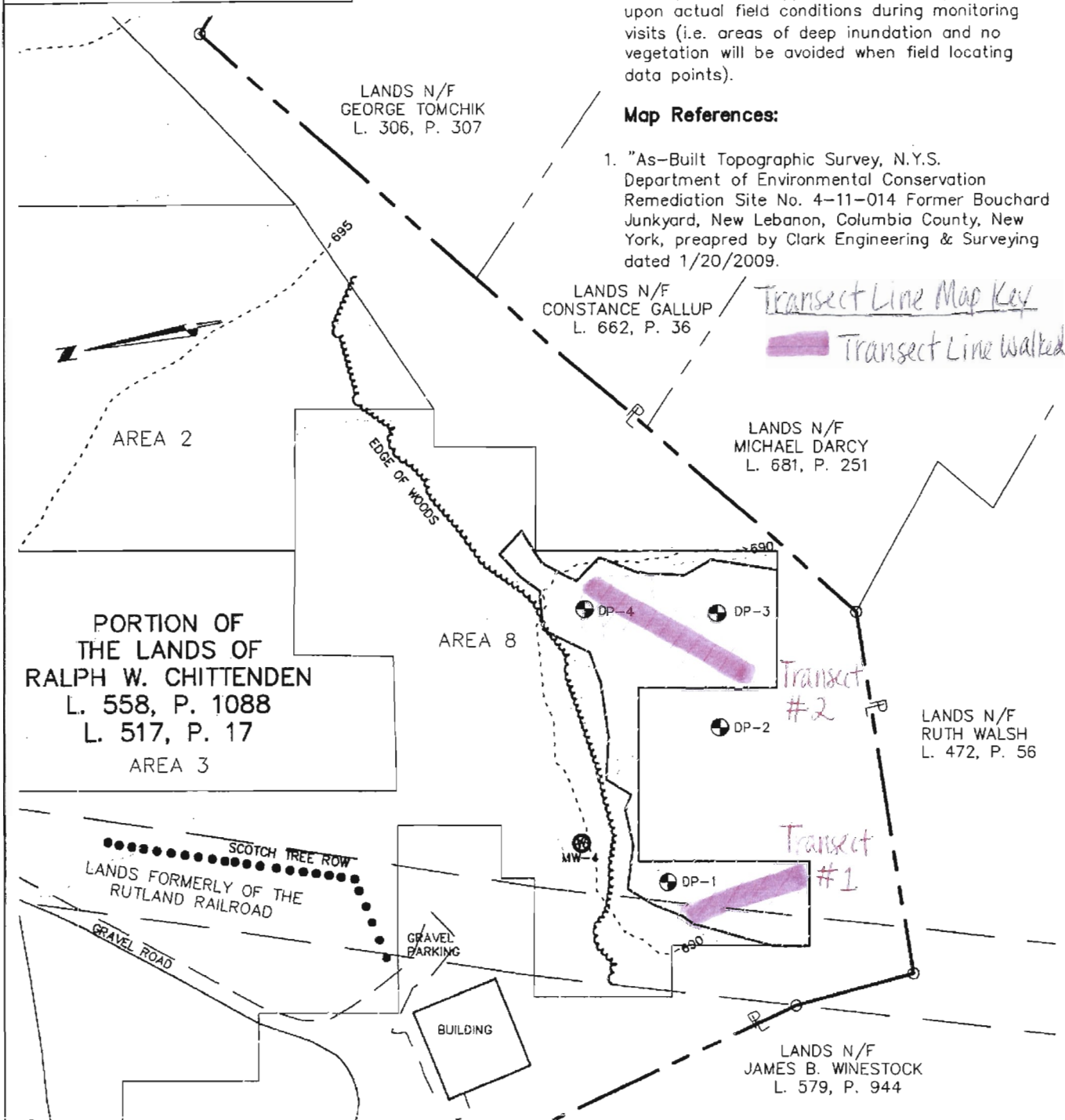
Map Notes:

1. Data points are approximate and dependent upon actual field conditions during monitoring visits (i.e. areas of deep inundation and no vegetation will be avoided when field locating data points).

Map References:

1. "As-Built Topographic Survey, N.Y.S. Department of Environmental Conservation Remediation Site No. 4-11-014 Former Bouchard Junkyard, New Lebanon, Columbia County, New York, prepared by Clark Engineering & Surveying dated 1/20/2009.

Transect Line Map Key
 *Transect Line Walked*



CAD DWG. FILE NAME: WETLAND RESTORATION AREA.DWG

Date	RECORD OF WORK	Appr.	FIGURE 1 DATA POINT LOCATION MAP WETLAND RESTORATION AREA MONITORING PLAN FORMER BOUCHARD JUNKYARD	
			NEW LEBANON	COLUMBIA COUNTY, NEW YORK
			C.T. MALE ASSOCIATES, P.C.	
			50 CENTURY HILL DRIVE, LATHAM, NY 12110 518.786.7400 * FAX 518.786.7299	
			Architecture & Building Systems Engineering * Civil Engineering Environmental Services * Survey & Land Information Services	
Drafter: SMW		Checker:	SCALE: 1"=100'	
Appr. by:		Proj. No. 08.8414	DATE: FEBRUARY 6, 2009	

NONE XREFS

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

Map Notes:

1. Data points are approximate and dependent upon actual field conditions during monitoring visits (i.e. areas of deep inundation and no vegetation will be avoided when field locating data points).

Map References:

1. "As-Built Topographic Survey, N.Y.S. Department of Environmental Conservation Remediation Site No. 4-11-014 Former Bouchard Junkyard, New Lebanon, Columbia County, New York, prepared by Clark Engineering & Surveying dated 1/20/2009.

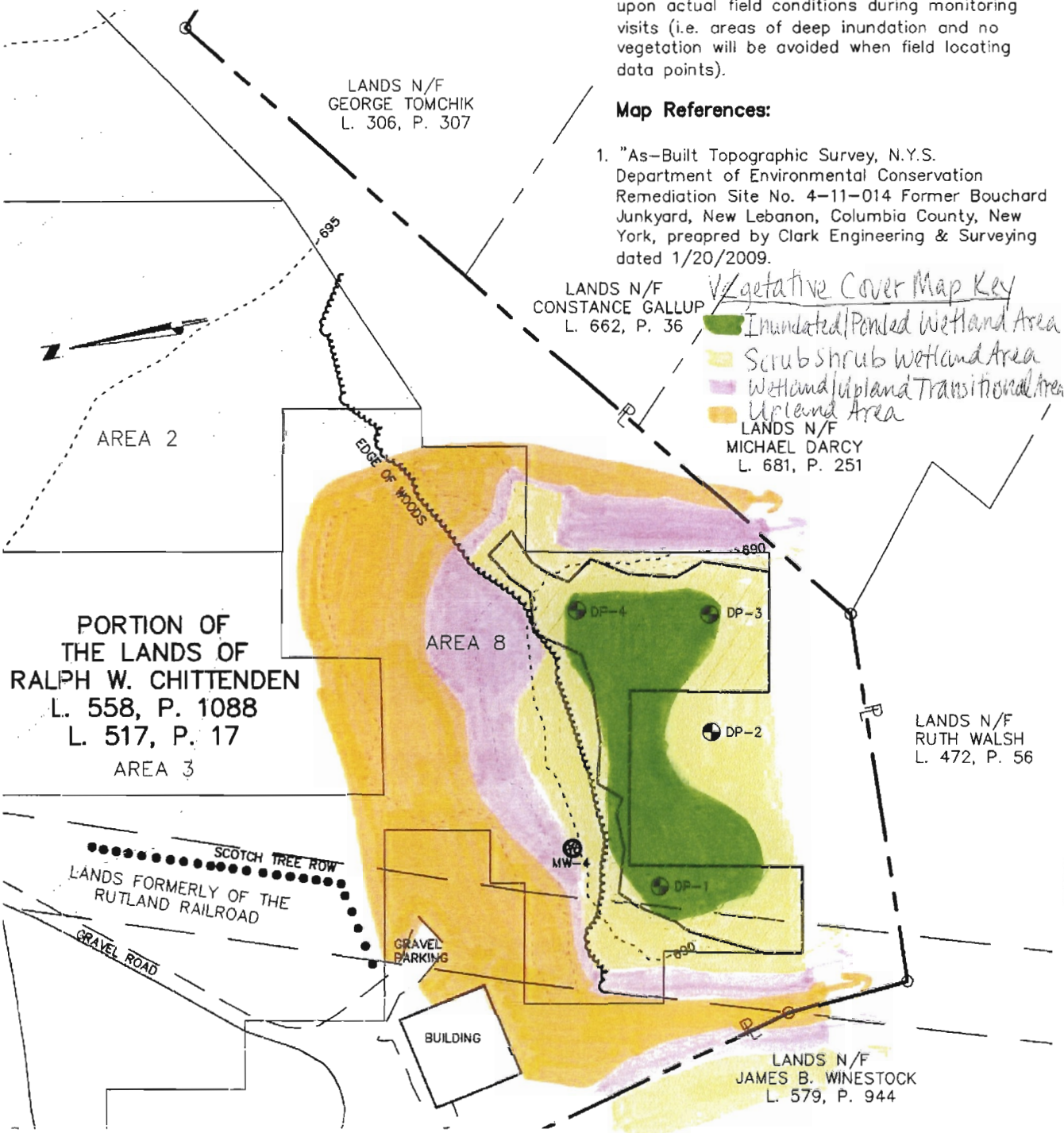
LANDS N/F
CONSTANCE GALLUP
L. 662, P. 36

Vegetative Cover Map Key
 Inundated/Ponded Wetland Area
 Scrub Shrub Wetland Area
 Wetland/Upland Transitional Area
 Upland Area

LANDS N/F
MICHAEL DARCY
L. 681, P. 251

LANDS N/F
RUTH WALSH
L. 472, P. 56

LANDS N/F
JAMES B. WINESTOCK
L. 579, P. 944



Date	RECORD OF WORK	Appr.	FIGURE 1 DATA POINT LOCATION MAP WETLAND RESTORATION AREA MONITORING PLAN FORMER BOUCHARD JUNKYARD NEW LEBANON COLUMBIA COUNTY, NEW YORK C.T. MALE ASSOCIATES, P.C. 50 CENTURY HILL DRIVE, LATHAM, NY 12110 518.786.7400 * FAX 518.786.7299 Architecture & Building Systems Engineering * Civil Engineering Environmental Services * Survey & Land Information Services	
Drafter: SMW	Checker:		     	
Appr. by:	Proj. No. 08.8414		SCALE: 1"=100' DATE: FEBRUARY 6, 2009	

CAD DWG. FILE NAME: WETLAND RESTORATION AREA.DWG

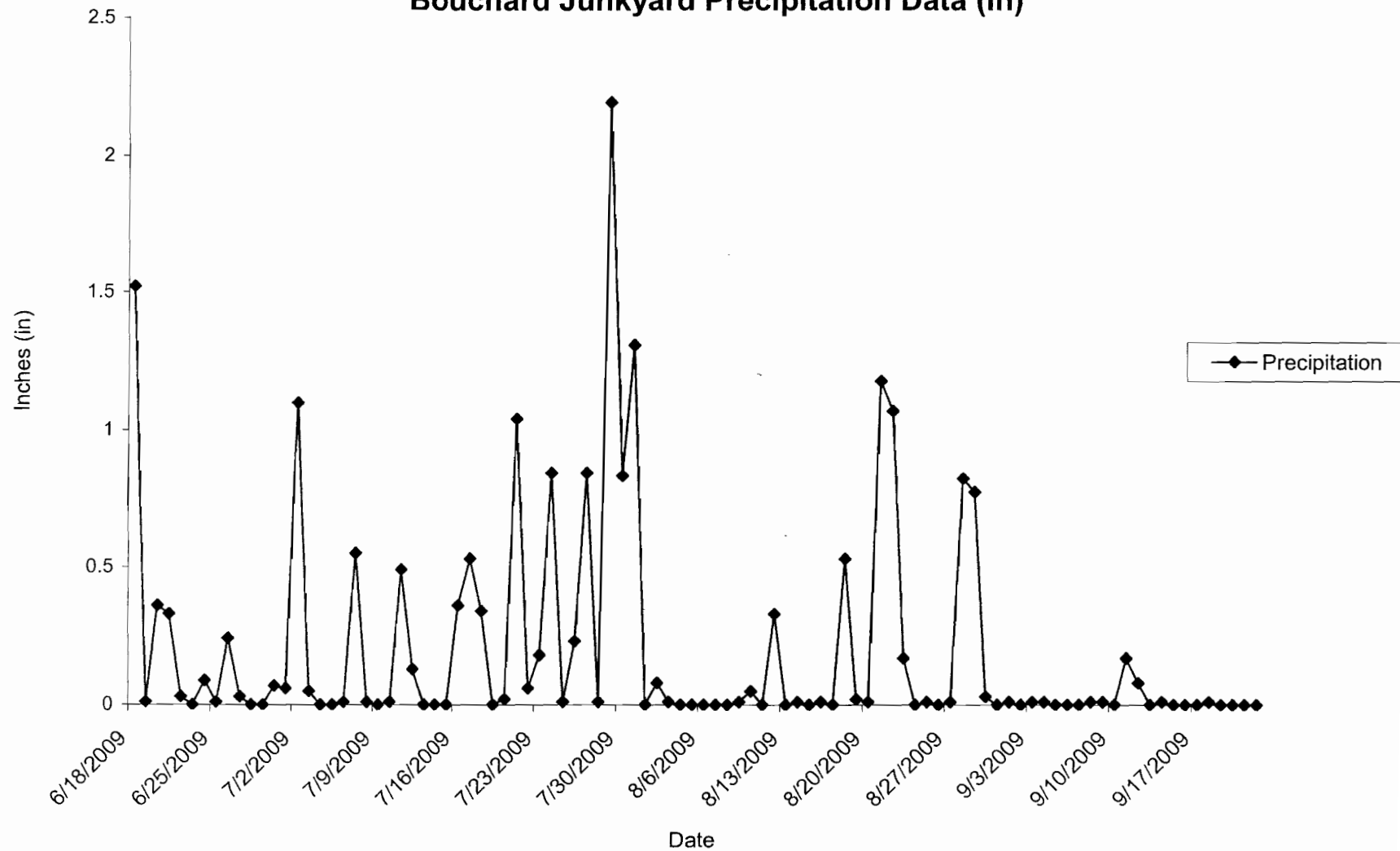
Attachment E

Bouchard Junkyard Precipitation Data

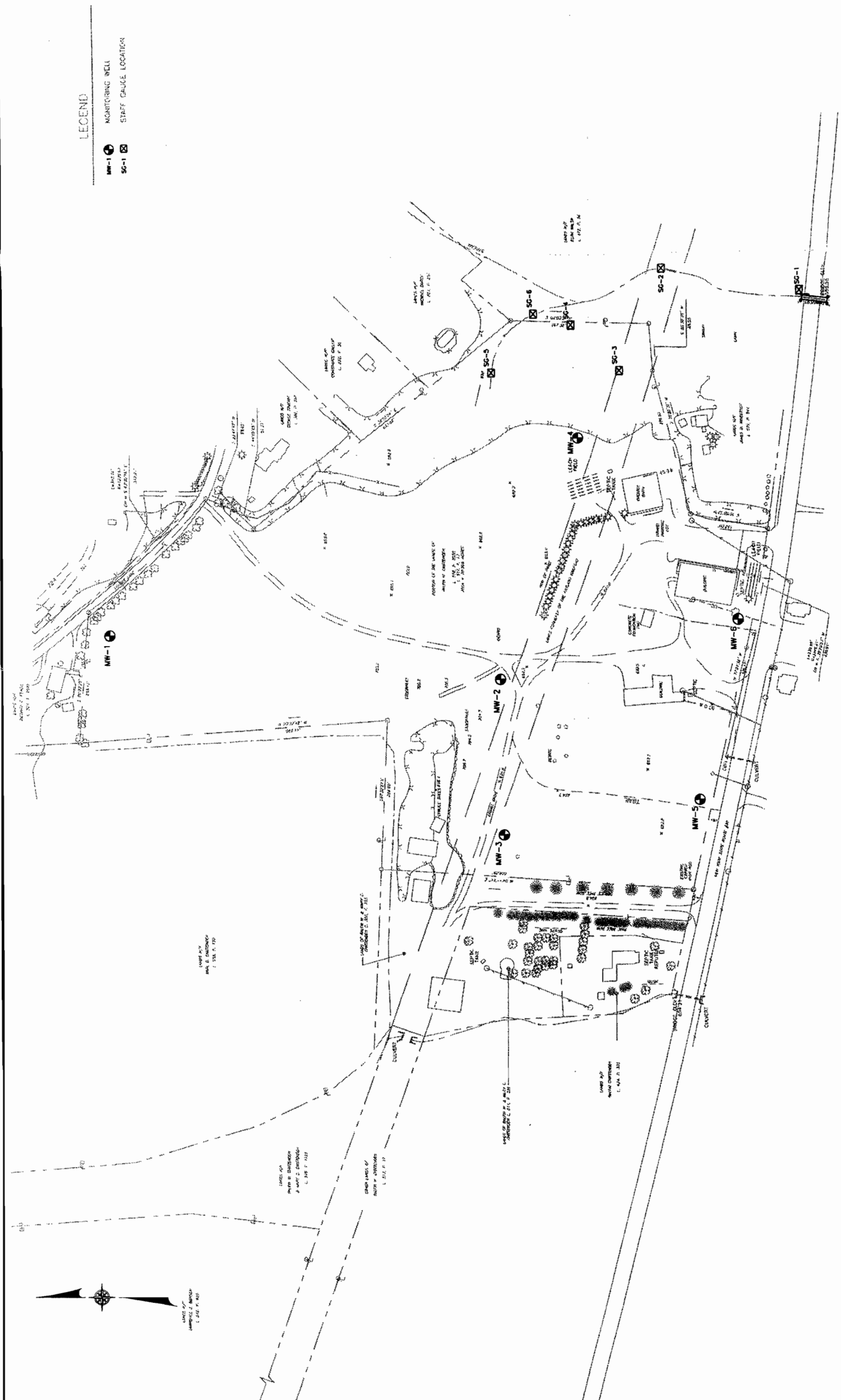
Bouchard Junkyard Precipitation Data in Inches (in)	
Date	Precipitation (in)
6/18/2009	1.52
6/19/2009	0.01
6/20/2009	0.36
6/21/2009	0.33
6/22/2009	0.03
6/23/2009	0
6/24/2009	0.09
6/25/2009	0.01
6/26/2009	0.24
6/27/2009	0.03
6/28/2009	0
6/29/2009	0
6/30/2009	0.07
7/1/2009	0.06
7/2/2009	1.1
7/3/2009	0.05
7/4/2009	0
7/5/2009	0
7/6/2009	0.01
7/7/2009	0.55
7/8/2009	0.01
7/9/2009	0
7/10/2009	0.01
7/11/2009	0.49
7/12/2009	0.13
7/13/2009	0
7/14/2009	0
7/15/2009	0
7/16/2009	0.36
7/17/2009	0.53
7/18/2009	0.34
7/19/2009	0
7/20/2009	0.02
7/21/2009	1.04
7/22/2009	0.06
7/23/2009	0.18
7/24/2009	0.84
7/25/2009	0.01
7/26/2009	0.23
7/27/2009	0.84
7/28/2009	0.01
7/29/2009	2.19
7/30/2009	0.83
7/31/2009	1.31
8/1/2009	0
8/2/2009	0.08
8/3/2009	0.01
8/4/2009	0
8/5/2009	0
8/6/2009	0

Bouchard Junkyard Precipitation Data in Inches (in)	
Date	Precipitation (in)
8/7/2009	0
8/8/2009	0
8/9/2009	0.01
8/10/2009	0.05
8/11/2009	0
8/12/2009	0.33
8/13/2009	0
8/14/2009	0.01
8/15/2009	0
8/16/2009	0.01
8/17/2009	0
8/18/2009	0.53
8/19/2009	0.02
8/20/2009	0.01
8/21/2009	1.18
8/22/2009	1.07
8/23/2009	0.17
8/24/2009	0
8/25/2009	0.01
8/26/2009	0
8/27/2009	0.01
8/28/2009	0.82
8/29/2009	0.77
8/30/2009	0.03
8/31/2009	0
9/1/2009	0.01
9/2/2009	0
9/3/2009	0.01
9/4/2009	0.01
9/5/2009	0
9/6/2009	0
9/7/2009	0
9/8/2009	0.01
9/9/2009	0.01
9/10/2009	0
9/11/2009	0.17
9/12/2009	0.08
9/13/2009	0
9/14/2009	0.01
9/15/2009	0
9/16/2009	0
9/17/2009	0
9/18/2009	0.01
9/19/2009	0
9/20/2009	0
9/21/2009	0
9/22/2009	0

Bouchard Junkyard Precipitation Data (in)



Attachment F
Staff Gauge Location Map



BOUCHARD JUNKYARD SITE
NEW LEBANON, NEW YORK
SAMPLE LOCATION MAP