Albany Landfill Eastern Expansion

Wetland Delineation Report

Albany Co., New York

CHA Project Number: 12206.4002.1106

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1.0 INTRODUCTION

This report describes the wetlands that occur on the lands adjacent to the Rapp Road (Albany) Landfill in Albany County, New York (Figure 1 – Project Location Map). The Jurisdictional Determination (JD) area is approximately 134.26 acres in size and consists of dedicated Pine Bush Preserve lands, City-owned property, and State-owned lands. The City land is located to the north of the existing active landfill cell. Also north of the landfill is the Fox Run Trailer Park that is generally vacant and was dedicated by the City to the Pine Bush Preserve Commission (PBPC). West of the landfill are additional City-owned lands that have also been dedicated to the PBPC. Directly east of the landfill are lands owned by the NYS Department of Environmental Conservation that are not formally dedicated to the PBPC but are generally managed by them. All of these lands are included in this single JD request since they represent potential areas of impact, restoration, and alternative assessment. They are referred to as the "project area."

Clough Harbour & Associates, LLP (CHA) was retained to delineate and describe the wetlands regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act and the New York State Department of Environmental Conservation (NYSDEC) under Article 24 of the New York State Environmental Conservation Law.

This report is intended to be used as documentation of the wetland boundaries and, if needed, to supplement a wetlands permit application to USACE and NYSDEC. The report includes a general site description, site ecology, and wetland descriptions and is complemented by field data sheets, site photographs and a wetland delineation map that are presented in the attachments.

2.0 AGENCY RESOURCE INFORMATION

Prior to visiting the site, various maps and other sources of background information were reviewed. These included the:

- New York State Department of Transportation (NYSDOT) topographic map (Albany Quadrangle, Figure 1),
- New York State Department of Environmental Conservation (NYSDEC) New York State Freshwater Wetlands Map (Albany Quadrangle, Figure 2),
- United States Department of the Interior, Fish and Wildlife Service (USFWS), National Wetlands Inventory (NWI) Map (Albany Quadrangle, Figure 3),

- Federal Emergency Management Agency (FEMA), FEMA Flood Zones Map (Figure 2) (Albany Quadrangle),
- Albany County Soil Survey, dated June 1992 (Map 12) (Figure 4) and

3.0 METHODOLOGY

CHA conducted a wetland delineation of the trailer park and its surrounding lands as well as the undeveloped lands west of the active and capped landfill in May of 2005 and again in April of 2006. A site visit with USACE was conducted in June of 2006 to verify these wetland boundaries. CHA delineated the undeveloped lands to the east of the existing active and capped landfill in October of 2006. The delineation of wetland boundaries was conducted in accordance with the procedures provided in the U.S. Army Corps of Engineers Wetland Delineation Manual (1987). The "Routine Wetland Determination" method was used based on the characteristics of the project area.

Wetland boundaries were determined in the field based on the three parameter approach, whereby an area is a wetland if it exhibits vegetation adapted to wet conditions (hydrophytes), hydric soils, and the presence or evidence of water at or near the soil surface during the growing season (hydrology).

Coded surveyor's ribbons (e.g. flag code A-1, A-2, etc.) were placed along the wetland boundaries based on observations of vegetation, soils and hydrologic conditions. Data plots were located in the upland and wetland sides of the boundaries at various locations along the wetlands. Data sheets corresponding to each plot can be found in Attachment A.

Vegetative communities were described according to *Ecological Communities of New York State, Second Edition* (Edinger, 2002)[1] and *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, 1979)[2]. Representative photographs of the wetlands and upland portions of the site were taken and are provided in Attachment B.

[1] Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors), 2002. Ecological *Communities of New York State. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. (Draft for review)*. New York Natural Heritage Program, New York State Department of Environmental Conservation. Albany, NY.

[2] Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe, 1979. *Classification of wetlands and deepwater habitats of the United States*. U. S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.

4.0 GENERAL SITE DESCRIPTION

The 134.26 acre project area contains a mixture of terrestrial (upland), palustrine (wetland) and riverine (stream channel) community types. The terrestrial communities on site include mowed lawn with trees, successional old field, successional shrubland, successional northern hardwoods, pitch pine-oak forest and rich mesophytic forest.

The palustrine communities on site include reedgrass/purple loosestrife marsh, shallow emergent marsh, shrub swamp, vernal pool and red maple-hardwood swamp.

The riverine communities consist of stream channels that have been manipulated by human activity, apparently during the construction of the trailer park, as part of the P-4 Wetland Creation and Enhancement Mitigation Project that was done on site in June of 2002 and apparently historically to drain Wetland AA for agricultural purposes. All of these stream channels have been manipulated and can best be described as ditch/artificial intermittent stream.

The NYSDEC Freshwater Wetlands map (Figure 2) indicates three state-regulated wetlands A-11, A-32 and A-33 immediately northwest of the Albany landfill. These wetlands are indirectly connected to most of the wetlands on site and form the headwaters of Lake Rensselaer, which is located southeast of the landfill. The NYSDEC classifies A-11, A-32 and A-33 as Class 1 wetlands.

The NWI map (Figure 3) indicates the presence of multiple federally-regulated wetlands occurring within the project area. Some of these mapped wetlands are shown in the same locations as the state wetlands that are located northwest of the landfill.

The FEMA Flood Zones map (Figure 2) (Albany Quadrangle) indicates the presence of 100 year flood zones southeast but outside of the project area. These flood zones are associated with Rensselaer Lake and its immediate vicinity.

4.1 VEGETATION

Twelve vegetative community types, as described by Edinger (2002), were identified within the project area. These include mowed lawn with trees, successional old field, successional shrubland, successional northern hardwoods, pitch pine-oak forest, rich mesophytic forest, reedgrass/purple loosestrife marsh, shallow emergent marsh, shrub swamp, vernal pool, red

maple-hardwood swamp and ditch/artificial intermittent stream. These vegetative communities as they occur within the project area are described below.

4.1.1 Terrestrial (upland) Communities

4.1.1.1 Mowed Lawn with Trees

The mowed lawn with trees community is the major community type within the Fox Run Trailer Park area. This community is highly associated with the landscaped and maintained lawns associated with the trailer park. This community is dominated by grasses with dandelion (*Taraxacum officinale*), birdsfoot trefoil (*Loyus corniculata*), gill-over-the-ground (*Glechoma bederacea*), northern bedstraw (*Galium boreale*), clover (*Trifolium pratense* and *T. repens*) and other common forbs occurring scattered throughout these regularly mowed and maintained grassy areas. Trees occur randomly.

Common trees include Norway spruce (*Picea abies*), silver maple (*Acer saccharinum*), sugar maple (*Acer saccharum*), white pine (*Pinus strobus*) and cottonwood (*Populus deltoides*). Some shrubs, mostly planted ornamentals but some native, also occur scattered throughout this community. Honeysuckle (*Lonicera sp.*) and gray dogwood (*Cornus foemina*) were most commonly observed.

4.1.1.2 Successional Old Field

A successional old field occurs along the northwest border of the trailer park, between the park and the adjacent railroad. This community type is also one of the dominant upland community types in the vicinity of the trailer park.

Herbaceous species commonly encountered within this community include Queen-Anne's lace (*Daucus carota*), false baby's breath (*Galium mollugo*), aster (*Symphytotrichum sp.*), Virginia strawberry (*Fragaria virginiana*), timothy (*Phleum pratense*), dandelion, steeplebush (*Spiraea tomentosa*), Canada goldenrod (*Solidago canadensis*), narrow leaf goldenrod (*Solidago graminifolia*), little bluestem (*Schizachyrium scoparium*), orchard grass (*Dactylis glomerata*), spotted knapweed (*Centaurea biebersteinii*), fox grape (*Vitis labrusca*), American bittersweet (*Celastrus scandens*), black-eyed Susan (*Rudbeckia serotina*), cinquefoil (*Potentilla sp.*), birdsfoot trefoil, common milkweed (*Asclepias syriaca*), crown vetch (*Coronilla varia L.*),

common reed (*Phragmites australis*), ragweed (*Ambrosia artemisifolia*), New England aster (*Aster novae-angliae*), clover and common blackberry (*Rubus allegheniensis*).

Shrubs and saplings occur scattered throughout this community with a total cover of less than 50 percent of the total vegetation in any given area. Common shrub species include multiflora rose (*Rosa multiflora*), gray dogwood, common blackberry (*Rubus allegheniensis*), staghorn sumac (*Rhus typhina*) and buckthorn (*Rhamnus catahartica*). Red maple (*Acer rubrum*), cottonwood (*Populus deltoides*) and quaking aspen (*Populus tremuloides*) saplings occur throughout this community in low numbers.

4.1.1.3 Successional Shrubland

Successional shrubland communities make up a small portion of the site and occur primarily in areas associated with past disturbance and the edges of forested communities. This community is dominated by shrubs with saplings occurring randomly and in low numbers. The density of the herbaceous layer varies and is closely related to percent aerial cover by shrubs and saplings.

Shrub and sapling species include multiflora rose, common blackberry, honeysuckle (*Lonicera sp.*), gray dogwood, elderberry (*Sambucus canadensis*), staghorn sumac, buckthorn, red maple, cottonwood and quaking aspen.

Herbaceous species include sensitive fern (*Onoclea sensibilis*) and most of the species previously listed as occurring in the successional old field communities of the site.

4.1.1.4 Successional Northern Hardwoods

This community occurs as a transitional forested community on the edges of the older forested areas, along the ditch/artificial intermittent stream communities and in other areas of past disturbance.

Trees such as quaking aspen, black cherry (*Prunus serotina*), cottonwood, red maple, white ash (*Fraxinus americana*), green ash (*Fraxinus pennsylvanica*), American elm (*Ulmus americana*) and sugar maple (*Acer saccharum*) dominate this community. Saplings of the canopy tree species dominate the sub canopy.

The shrub layer ranges from sparse to moderately dense with species such as gray dogwood, honeysuckle, rose and blackberry.

The herbaceous layer is moderately dense. Species include goldenrod (*Solidago sp.*), aster, sensitive fern, Virginia creeper (*Parthenocissus quinquefolia*), mayapple (*Podophyllum peltatum*), Virginia strawberry, poison ivy (*Toxicodendron radicans*), jumpseed (*Polygonum virginianum*), wild sarsaparilla (*Aralia nudicaulis*), baneberry (*Actaea sp.*) and young plants of the shrubs and trees present.

4.1.1.5 Pitch Pine-Oak Forest

This community type occurs in random areas throughout the project area. Red oak (*Quercus rubra*) and white oak (*Quercus alba*) dominate the canopy of this community with pitch pine (*Pinus rigida*) occurring scattered throughout and somewhat common in some areas. White pine (*Pinus strobus*), black cherry, red maple and cottonwood trees may occur in low numbers and as sub canopy dominants.

The shrub layer is sparse to moderately dense and dominated by species such as highbush blueberry (*Vaccinium corymbosum*), lowbush blueberry (*Vaccinium angustifolium*), honeysuckle and blackberry. Shrub forms of the trees present also occur throughout the shrub layer.

Commonly found herbaceous species include goldenrod, mayapple, bracken fern (*Pteridium aquilinum*), partridgeberry (*Mitchella repens*), poison ivy, dogtooth violet (*Erythronium americanum*), black cherry and red maple.

4.1.1.6 Rich Mesophytic Forest

This community type is typified by a large number of codominant canopy species with lush shrub and herbaceous layers. This community occurs mostly surrounding Wetland C.

Common canopy trees include red oak, white oak, black cherry, sugar maple and red maple with an understory dominated by saplings of the trees present as well as quaking aspen, green ash, white ash and hickory (*Carya spp.*). Shrubs observed include young growth of most of the trees present as well as arrowwood (*Viburnum dentatum*), rose and honeysuckle. Herbs observed include young growth of the trees and shrubs and interrupted fern (*Osmunda claytoniana*), star flower (*Trientalis borealis*), painted trillium (*Trillium undulatum*), poison ivy, purple crane's-bill

(*Geranium maculatum*), garlic mustard (*Alliaria petiolata*), lady fern (*Athyrium filix-femina*), and common blue violet (*Viola papilionacea*).

4.1.2 Palustrine (wetland) Communities

4.1.2.1 Reedgrass/Purple Loosestrife Marsh

Reedgrass/purple loosestrife marsh is an emergent wetland dominated by the exotic and highly invasive common reed and purple loosestrife (*Lythrum salicaria*). Few other herbaceous species occur throughout this community because they are quickly out-competed and shaded by the more aggressive exotics. Native herbaceous species were typically found growing along the edges of this community. Species observed include sensitive fern, reed canary grass (*Phalaris arundinacea*) and the species listed as occurring in the successional old field and shallow emergent marsh communities.

4.1.2.2 Shallow Emergent Marsh

These wetlands are typically located in cleared areas along the edges of the red maple-hardwood swamp communities and along the ditch/artificial intermittent streams of the site. The wetland mitigation area (Wetland A) is entirely shallow emergent marsh.

This community is dominated by herbaceous species with shrubs occurring in low numbers. Species commonly encountered include purple loosestrife, common reed, narrow leaf goldenrod, soft rush (*Juncus effusus*), green bulrush (*Scirpus atrovirens*), fox sedge (*Carex vulpinoidea*), tussock sedge (*Carex stricta*), steeplebush, skunk cabbage (*Symplocarpus foetidus*), reed canary grass, jewelweed (*Impatiens capensis*) and horsetail (*Equisetum fluviatile*).

Shrubs and saplings occur throughout this community but in low numbers. Species observed include gray dogwood, buckthorn, elderberry, white willow (*Salix alba*), black willow (*Salix nigra*), green ash, red maple and silver maple.

4.1.2.3 Shrub Swamp

Shrub swamp is a shrub dominated wetland with greater than 50 percent cover by shrubs. This community type occurs in Wetland B along the forested edge and in small patches intermixed

with the other wetland communities of the site. Shrub cover in this community is typically very dense, providing greater than 80 percent cover.

Silky dogwood (*Cornus amomum*) was observed to be the dominant shrub with gray dogwood, spicebush (*Lindera benzoin*), rose, blackberry, white willow, arrowwood, steeplebush and elderberry occurring less frequently. Herbaceous species density varied and was highly dependant on percent cover by shrubs. Areas with a dense shrub cover had a sparse herbaceous layer and areas with a sparse shrub cover had a relatively lush herbaceous layer. Herbaceous species commonly found include sensitive fern, steeplebush, narrow leaf goldenrod, spotted touch-me-not and false baby's breath.

4.1.2.4 Vernal Pool

Wetland VP and portions of Wetland C are vernal pool communities. This temporarily flooded wetland type is critical habitat for numerous wildlife and invertebrate species. Some rare species, such as the eastern spadefoot toad (*Scaphiopus holbrookii*), Jefferson salamander (*Ambystoma jeffersonianum*) and blue-spotted salamander (*Ambystoma laterale*) are considered obligate vernal pool breeders and are highly dependant on this community type.

Vegetation in this community type is limited. Species observed within the vernal pool community of Wetland C include tussock sedge, sensitive fern and skunk cabbage with red maple trees and saplings as well as highbush blueberry shrubs along the edges of the community. Species dominant within Wetland VP include sensitive fern, royal fern (*Osmunda regalis*), highbush blueberry, arrowwood and gray birch (*Betual populifolia*).

4.1.2.5 Red Maple-Hardwood Swamp

The forested wetland communities on-site can be described as red maple-hardwood swamp according to Edinger (2002). These wetlands are dominated by red maple, cottonwood, green ash and American elm trees. The shrub layer within these communities ranges from sparse to dense and dominated by saplings of the dominant tree species along with shrubs such as gray dogwood, highbush blueberry and spicebush. A variety of herbaceous species including skunk cabbage, sedges and rushes, poison ivy, moss, sensitive fern, cinnamon fern (*Osmunda cinnamomea*), royal fern, jewelweed, dewberry and false nettle (*Boehmeria cylindrica*) were typically present.

4.1.3 Riverine (stream) Community

4.1.3.1 Ditch/Artificial Intermittent Stream

There are two stream channels in the project area. These streams show obvious characteristics of human influence/alteration. One stream channel is shown on the USGS Topographic map in the vicinity of the trailer park but occurs outside of the site.

The intermittent stream channel that flows from west to east, south of the trailer park (through part of Wetland B), can be classified as a ditch/artificial intermittent stream because it has apparently been directed into a man-made ditch. This stream flows into a stream of similar characteristics that flows through Wetlands D, F and AA.

The stream that flows west to east through a portion of Wetland B is fed by Wetland B and tile drains that were placed to drain the field located south of the stream. The stream that flows through Wetlands F, D and AA originates from an outfall of a vernal pond located west of the site and receives additional water from Wetland A as well as the wetlands that it flows through.

Portions of these stream channels are vegetated with herbaceous species. Areas with standing water have little to no vegetation but saturated areas and areas along the banks generally consist of jewelweed, common reed and sensitive fern. Willow, cottonwood, quaking aspen, green ash, elderberry and red maple trees, saplings and shrubs occur along the edges of the streams.

4.2 SOILS

Soils data for the project area was obtained from the Albany County Soil Survey (Figure 4). This information was used in conjunction with on-site soil sampling to determine the presence of hydric soils. The following is a list and brief description of the soils that occur within the project area.

Symbol	Name
Ad	Adrian muck
CoA	Colonie loamy fine sand, 0 to 3 percent slopes
CoB	Colonie loamy fine sand, 3 to 8 percent slopes
CoC	Colonie loamy fine sand, rolling

CoD	Colonie loamy fine sand, hilly
EnA	Elnora loamy fine sand, 0 to 3 percent slopes
Gr	Granby loamy fine sand
St	Stafford loamy fine sand
Ud	Udipsamments, smoothed
Uf	Udipsamments-Urban land complex

- Adrian muck (Ad). This Hyric soil is a very deep, very poorly drained soil that occurs in bogs, depressions, on uplands and in concave basins on lowland plains.

- Colonie loamy fine sand, 0-3% slope (CoA) is a very deep, nearly level, well drained to somewhat excessively drained soil, on plains and deltas. Included in this soil are small areas of moderately well drained Elnora soils, somewhat poorly drained Stafford soils, and poorly drained and very poorly drained Granby soils in depressions and low areas. Soil properties include:

- Colonie loamy fine sand, 3 to 8 percent slopes (CoB). These soils are very deep and well drained to somewhat excessively drained. The seasonal high water table occurs at depths of greater than 6 feet but in some years the water table may fluctuate to within 3.5 feet of the soil surface for brief periods in early spring.

- Colonie loamy fine sand, rolling (CoC). These soils are very deep and well drained to somewhat excessively drained. The seasonal high water table occurs at depths of greater than 6 feet but in some years the water table may fluctuate to within 3.5 feet of the soil surface for brief periods in early spring.

- Colonie loamy fine sand, hilly (CoD). This soil is very deep and well drained to somewhat excessively drained. The seasonal high water table occurs at depths of greater than 6 feet but in some years the water table may fluctuate to within 40 inches of the soil surface for brief periods in early spring.

- Elnora loamy fine sand, 0 to 3 percent slopes (EnA). This soil is very deep and moderately well drained. It occurs on deltas and glacial lake plains. The seasonal high water table is at a depth of 1.5 to 2 feet from the soil surface from February to May.

- Granby loamy fine sand (Gr). This soil is very deep and poorly drained to very poorly drained. Areas of this soil occur in flat and slightly depressional areas of glacial lake

plains or deltas. The seasonal high water table occurs at a depth of 1 foot from the soil surface from November to June.

- Stafford loamy fine sand (St). This soil is very deep and somewhat poorly drained. The seasonal high water table is 0.5 to 1.5 feet below the soil surface from January to May.

- Udipsamments, smoothed (Ud). These moderately well drained to somewhat excessively well drained soils are nearly level to very steep areas of disturbed sandy soils. The depth of the seasonal high water table is normally at a depth of greater than 6 feet but occasionally occurs within 4 feet of the soil surface.

- Udipsamments-Urban land complex (Uf). These soils are nearly level to gently sloping, very deep and well drained to somewhat excessively drained. The depth of the seasonal high water table is normally at a depth of greater than 6 feet but occasionally occurs within 4 feet of the soil surface.

4.3 HYDROLOGY

Hydrology of the wetlands on-site is primarily a function of ground water, surface water runoff and rainfall. Wetlands A, B, C, D, F and AA appear to meet the criteria for designation as Waters of the United States. Wetlands G, H, DD, EE and VP appear to be hydrologically isolated.

The water quality of surface waters in New York State is classified by the NYSDEC as "A," "B," "C," or "D," with special classifications for water supply sources. A "T" used with the classification indicates the stream supports, or may support, a trout population. Water quality standards are also provided. The standards apply the same classification system but, in some cases, are more stringent in an effort to eventually improve the water quality. The higher standard is most often used to reflect the existence or the potential for breeding trout, whereby the standard for discharges includes stricter oxygen requirements (designation of (T) as discussed above). All surface waters with a Classification and/or a Standard of C(T) or better are regulated by the State.

Two stream channels occur within the project area. These streams are not mapped on the USGS topographic map. Both streams appear to be either man-made or altered from their natural state.

These streams connect to each other on site, flow east off site, and form an unnamed tributary to Rensselaer Lake. This unnamed tributary occurs within the Lower Hudson River Drainage Basin and is a tributary to the Hudson River. The portions of the stream that occur on site are classified as Class D surface waters.

5.0 DISCUSSION OF WETLAND BOUNDARIES

Based on the methodology discussed in Section III of this report, eleven wetland areas (Wetlands A, B, C, D, F, G, H, AA, DD, EE and VP) were identified and delineated within the project area. A total of 31.46 acres (1370542.05 sq. ft.) of wetland and 3945 linear feet of perennial stream channel are present on site. Six of the wetlands (Wetlands A, AA, B, C, D and F) (totaling 31.10 acres (1354899.09 sq. ft.)) and both of the stream channels on site appear to be jurisdictional due to a direct hydrologic connection to Waters of the U.S., in this case the Hudson River via Rensselaer Lake. Wetlands G, H, DD, EE and VP (totaling 0.36 acres (15642.96 sq. ft.)) appear to be hydrologically isolated from Waters of the U.S.

Wetland VP is a vernal pool and Wetlands DD and EE are small depressional wetlands that may be seasonally inundated with vernal pool characteristics. Vernal pools are important communities for certain rare species. Surveyed wetland boundaries are provided in Attachment C – Wetland Location Map.

The following table provides a list of the vegetative communities that occur within each wetland of the project area as well as a listing of the plant species within each wetland.

Table 1
Wetland Communities and Species Compositions

Wetland ID	Wetland Type	Dominant Vegetation
A	Shallow Emergent Marsh (PEM1)	purple loosestrife, common reed, narrow leaf goldenrod, soft rush, green bulrush, fox sedge, tussock sedge, reed canary grass, spotted touch-me-not, cattail, sensitive fern
B	Ditch/ Artificial Intermittent Stream (R3UB3)	spotted touch-me-not, cattail, soft rush, purple loosestrife, common reed, white willow, black willow

Wetland ID	Wetland Type	Dominant Vegetation
	Reedgrass/ Purple Loosestrife Marsh (PEM1)	purple loosestrife, common reed
	Shallow Emergent Marsh (PEM1)	purple loosestrife, common reed, narrow leaf goldenrod, soft rush, green bulrush, fox sedge, tussock sedge, steeplebush, skunk cabbage, reed canary grass, spotted touch-me-not, water horsetail
	Shrub Swamp (PEM1)	Sensitive fern, spotted touch-me-not, water horsetail, moss, gray dogwood, silky dogwood, elderberry, fox grape, American bittersweet
	Red Maple-Hardwood Swamp (PFO1)	red maple, cottonwood, green ash, American elm, gray dogwood, highbush blueberry, spicebush, skunk cabbage, sedges, rushes, poison ivy, moss, sensitive fern, cinnamon fern, royal fern, spotted touch-me-not, dewberry, false nettle
C	Vernal Pool (PEM)	tussock sedge, sensitive fern, skunk cabbage
	Red Maple Hardwood Swamp (PFO1)	red maple, cottonwood, green ash, American elm, gray dogwood, highbush blueberry, spicebush, skunk cabbage, sedges, rushes, poison ivy, moss, sensitive fern, cinnamon fern, royal fern, spotted touch-me-not, dewberry, false nettle
D	Ditch/ Artificial Intermittent Stream (R3UB3)	spotted touch-me-not, cattail, soft rush, purple loosestrife, common reed, white willow, black willow
	Shallow Emergent Marsh (PEM1)	purple loosestrife, common reed, narrow leaf goldenrod, soft rush, skunk cabbage, reed canary grass, spotted touch-me-not, water horsetail
F	Ditch/ Artificial Intermittent Stream (R3UB3)	spotted touch-me-not, cattail, soft rush, purple loosestrife, common reed, white willow, black willow
	Shallow Emergent Marsh (PEM1)	purple loosestrife, common reed, narrow leaf goldenrod, soft rush, skunk cabbage, reed canary grass, spotted touch-me-not, water horsetail

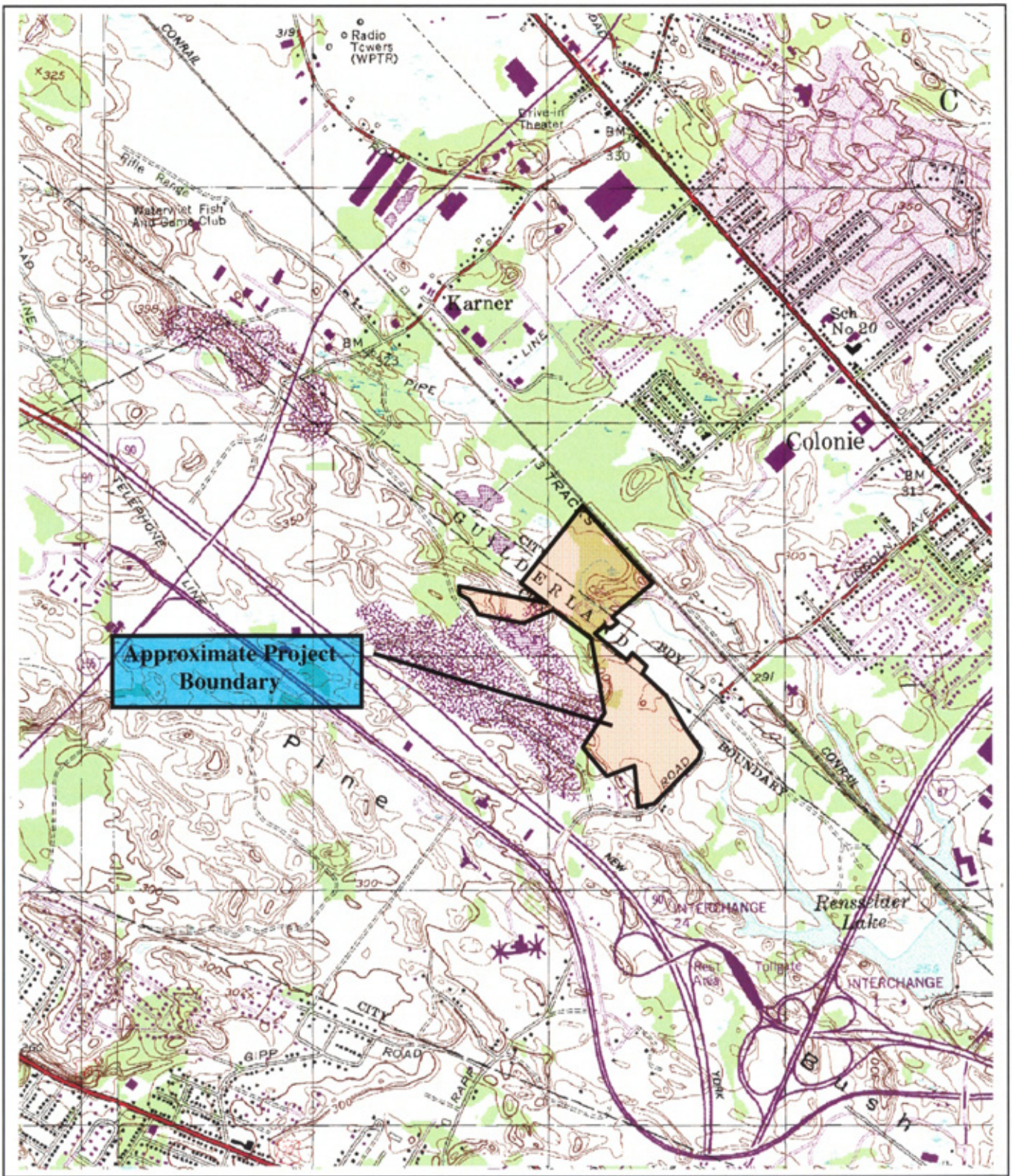
Wetland ID	Wetland Type	Dominant Vegetation
	Reedgrass/ Purple Loosestrife Marsh (PEM1)	purple loosestrife, common reed
G	Shallow emergent marsh (PEM1)	switchgrass, cottonwood (sapling), common reed, purple loosestrife, pussy willow
H	Reedgrass/ Purple Loosestrife Marsh (PEM1)	Common reed, switchgrass
VP	Vernal pool (PUB)	Sensitive fern, royal fern, arrowwood, gray birch, highbush blueberry
AA	Ditch/ Artificial Intermittent Stream (R3UB3)	spotted touch-me-not, sensitive fern
	Reedgrass/ Purple Loosestrife Marsh (PEM1)	common reed
	Shallow Emergent Marsh (PEM1)	purple loosestrife, common reed, narrow leaf goldenrod, soft rush, raspberry, skunk cabbage, reed canary grass, spotted touch-me-not, water horsetail, elderberry, silky dogwood
	Red Maple-Hardwood Swamp (PFO1)	red maple, cottonwood, green ash, American elm, silky dogwood, spicebush, elderberry, skunk cabbage, sedges, sensitive fern, cinnamon fern, royal fern, spotted touch-me-not
DD	Shrub Swamp (PSS1)	jumpseed, red maple, gray dogwood
EE	Red Maple Hardwood Swamp (PFO1)	Red maple, spotted touch-me-not, cinnamon fern

6.0 SUMMARY

Clough Harbour & Associates, LLP delineated wetlands and stream channels on a 134.26 acre site located adjacent to the existing Rapp Road Landfill in Albany County, New York. A total of 31.46 acres (1370542.05 sq. ft.) of wetland and 3945 linear feet of perennial stream channel are present on site. Wetlands A, AA, B, C, D and F (totaling 31.10 acres (1354899.09 sq. ft.)) and both of the stream channels on site appear to be jurisdictional due to a hydrological connection to Waters of the U.S. Wetlands G, H, DD, EE and VP (totaling 0.36 acres (15642.96 sq. ft.)) are hydrologically isolated from Waters of the U.S. Wetland VP is a vernal pool and Wetlands DD and EE are small depressional wetlands that may be seasonally inundated with vernal pool characteristics. Vernal pool communities are known to provide critical habitat for certain rare species so any proposed impacts to these wetlands will need to be considered during the permitting process.

This report describes these resources as they occur on site. It is intended to be used as information for a verification of wetland boundaries, and if needed, supplemental information in support of a wetland permit application to the Corps & NYSDEC.

Figures



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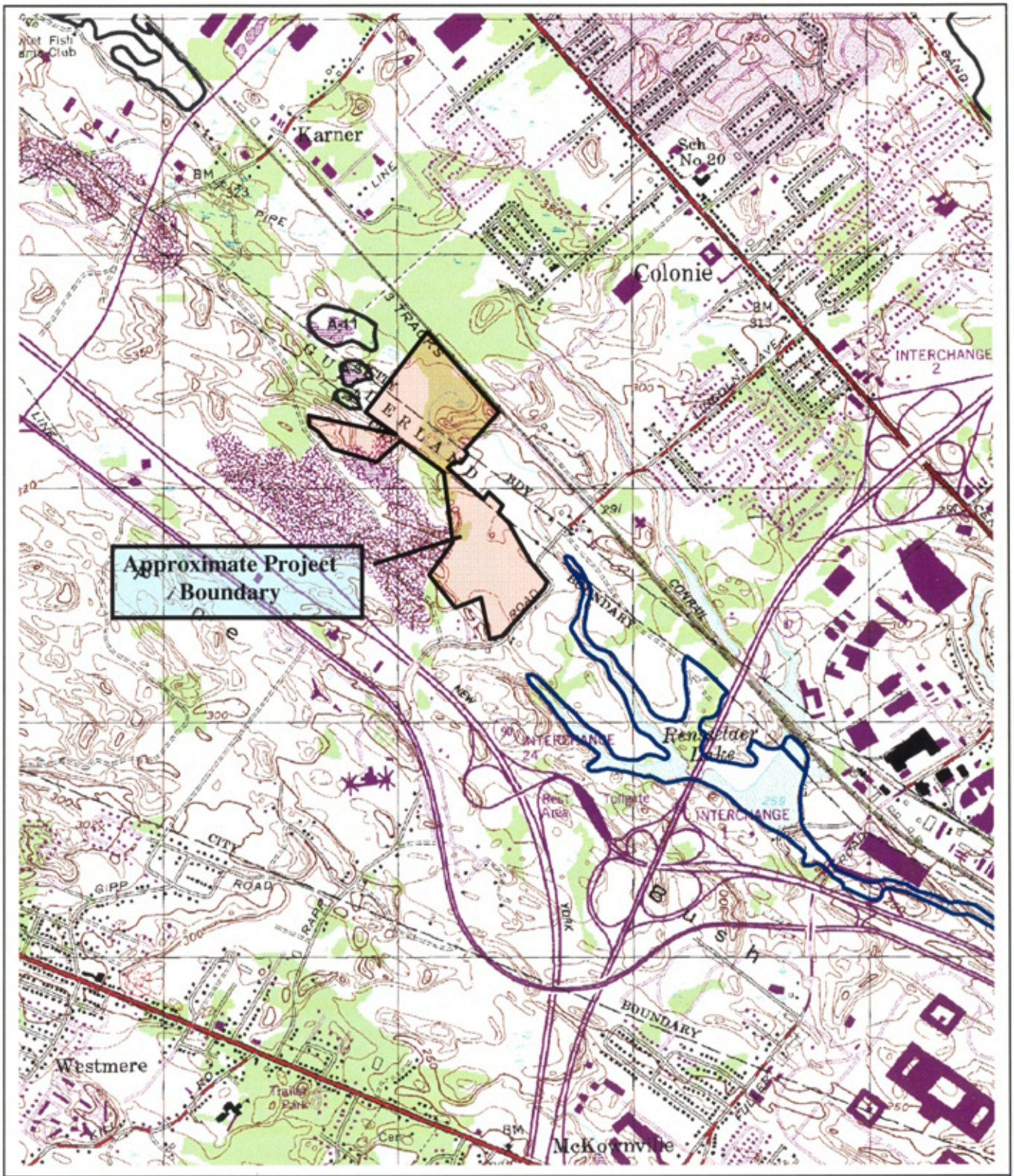
CLOUGH HARBOUR & ASSOCIATES LLP

Project Location Map

Scale 1" = 2000'

Figure 1

Rapp Raod Landfill Eastern Expansion
Albany County, NY



Key: 100 Year Flood Plain (typ) State Wetland (typ)

N

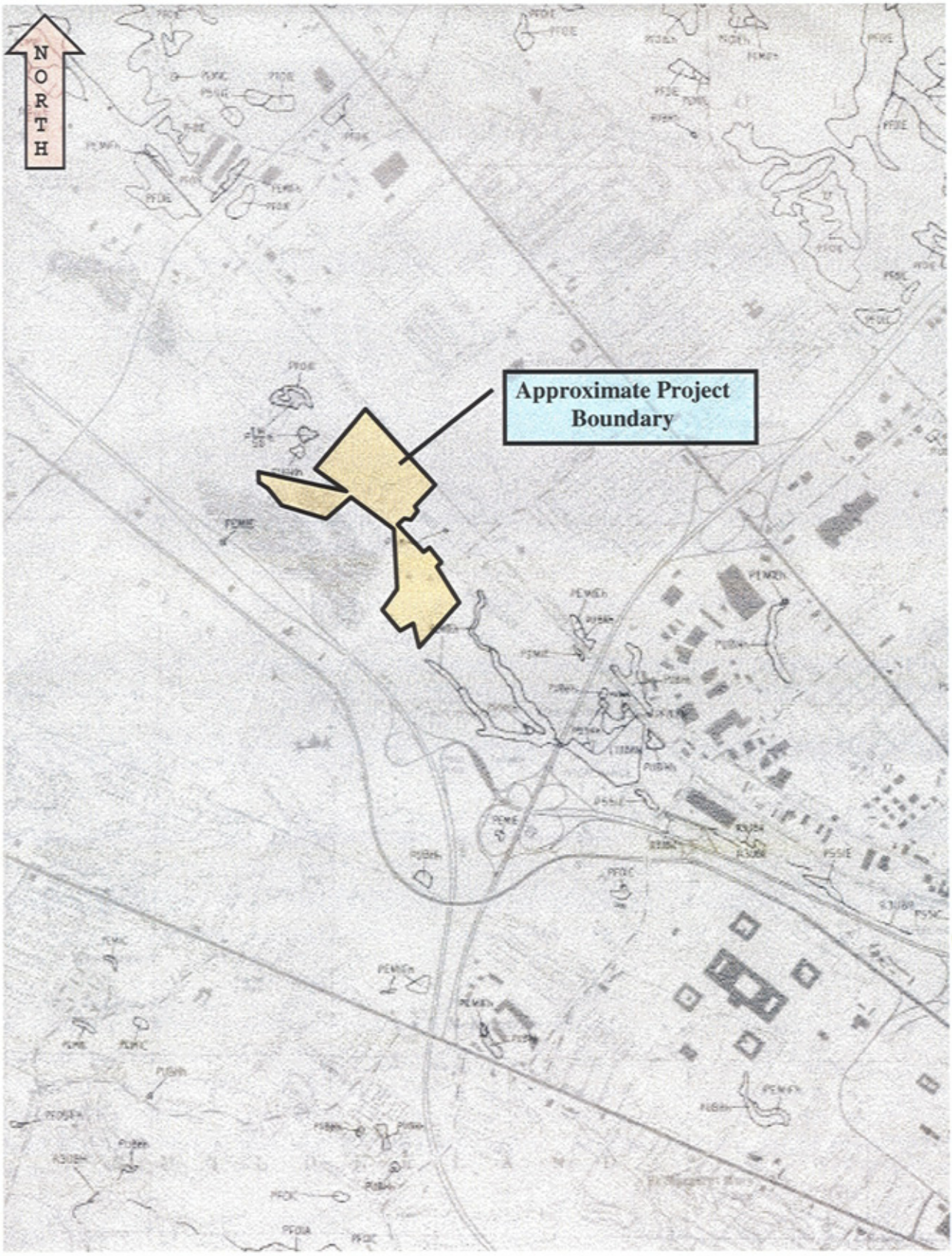
CLOUGH HARBOUR & ASSOCIATES LLP

NYS Regulated Wetlands\FEMA Flood Zones Map

Scale 1" = 2000'

Figure 2

Rapp Raod Landfill Expansion
Albany County, NY



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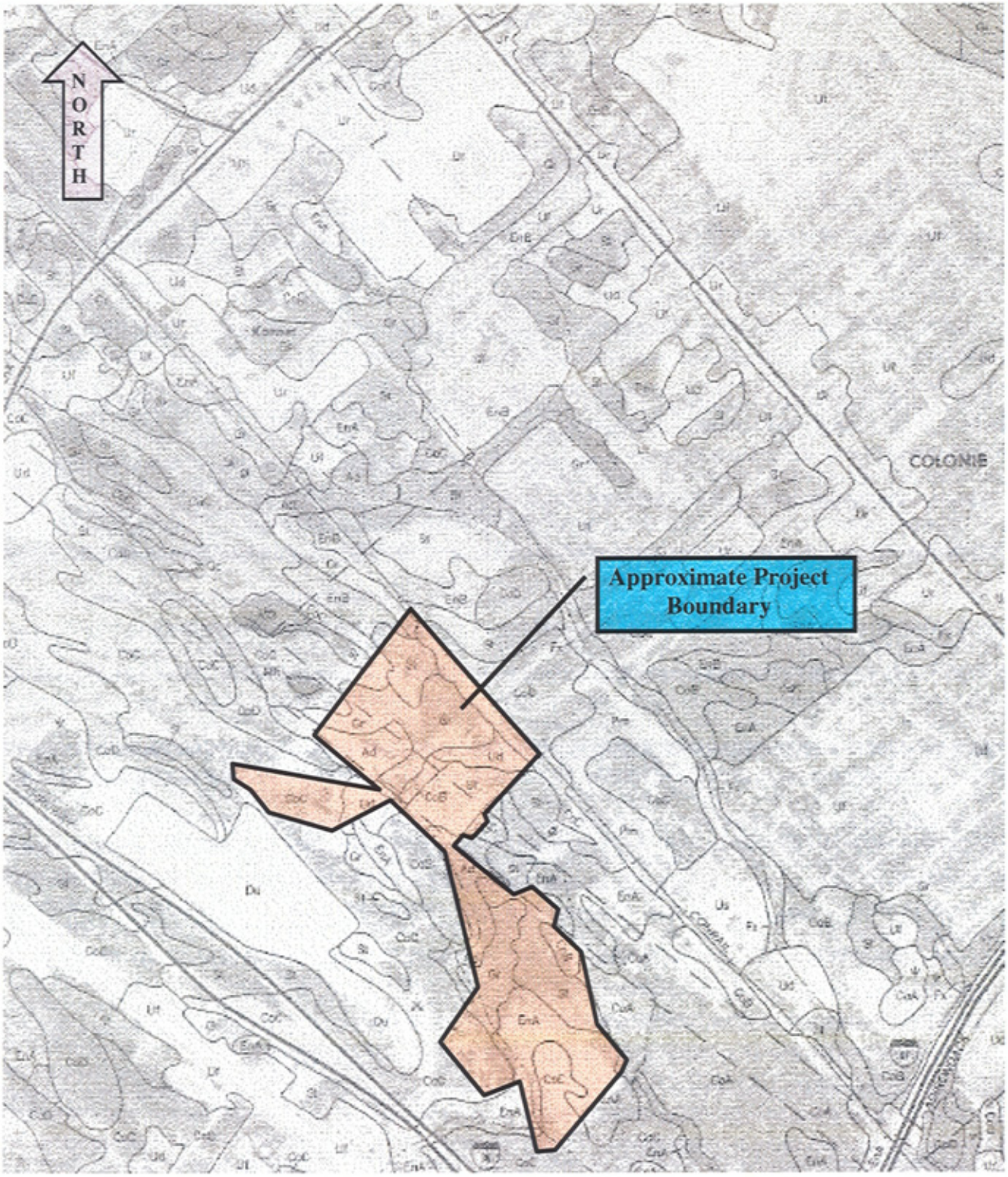
NATIONAL WETLANDS INVENTORY MAP

Rapp Road Landfill Eastern Expansion
Albany County, NY
Albany USGS Quad

Scale: NTS | **Figure 3**



CLOUGH HARBOUR & ASSOCIATES LLP

SOILS MAP

Rapp Road Landfill Expansion
Albany County, NY
Albany USGS Quad

Scale: NTS	Figure 4

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 1

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Shallow Emergent Marsh/Wtld. Mitiga
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Wet A
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		Near flag A-6

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Scirpus cyperinus	Herb	FACW+	*Alisma plantago-aquatica*	Herb	OBL
Wool-Grass			Water-Plantain,Broad-Leaf		
Carex stricta	Herb	OBL	*Carex lurida*	Herb	OBL
Sedge,Uptight			Sedge,Shallow		
Juncus effusus	Herb	FACW+	*Lythrum salicaria*	Herb	FACW+
Rush,Soft			Loosestrife,Purple		
Typha latifolia	Herb	OBL	*Phragmites australis*	Herb	FACW
Cattail,Broad-Leaf			Reed,Common		
Salix alba	Herb	FACW			
Willow,White					

Percent of Dominant Species that are OBL, FACW or FAC: (excluding FAC-) 9/9 = 100.00%	**FAC Neutral:** 9/9 = 100.00% **Numeric Index:** 14/9 = 1.56

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	+/- 4 *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- YES **Inundated**
- YES **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- YES **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site:	Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner:	City of Albany		**County:** Albany
Investigators:	John Greaves & Bryan Hunter		**State:** New York
			Plot ID: 1

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No
Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-3	O	10YR2/1	N/A	N/A	N/A	Loam
3-8	A	Gley 1 3/10Y	10YR2/1 2.5Y6/2	Common Few	Distinct Faint	Sandy loam
9+	B	5Y3/1	10YR2/1	Common	Distinct	Sandy clay

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	YES **High Organic Content in Surface Layer in Sandy Soils**
YES **Sulfidic Odor**	YES **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
YES **Gleyed or Low Chroma Colors**	YES **Other (Explain in Remarks)**

Remarks:
The A layer also had few/distinct 10YR 2/2 mottles

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 2

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Successional Old Field
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Upl A
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		Near flag A-6

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Solidago canadensis	Herb	FACU	*Phleum pratense*	Herb	FACU
Golden-Rod,Canada			Timothy		
Phragmites australis	Herb	FACW	*Rubus allegheniensis*	Herb	FACU-
Reed,Common			Blackberry,Allegheny		
Euthamia graminifolia	Herb	FAC	*Rosa rugosa*	Shrub	FACU-
Fragrant-Golden-Rod,Flat-Top			Rose,Rugosa		
Asclepias hirtella	Herb	UPL	*Lonicera tatarica*	Shrub	FACU*
Milkweed,Green			Honeysuckle,Tartarian		
Fragaria virginiana	Herb	FACU			
Strawberry,Virginia					

Percent of Dominant Species that are OBL, FACW or FAC: (excluding FAC-) 2/9 = 22.22%

FAC Neutral: 1/8 = 12.50%
Numeric Index: 34/9 = 3.78

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- NO **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- NO **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 2

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No
Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-11	A	10YR4/3	N/A	N/A	N/A	Silty clay loam, small cobbles
12-30	B	10YR6/1	7.5YR5/8 10YR4/3	Common Common	Distinct Distinct	Sandy loam

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	NO **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
NO **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:
Suspect former grading and past soil disturbance

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 3

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** shallow emergent marsh
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Wet B
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag B-106

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Euthamia graminifolia	Herb	FAC	*Spiraea tomentosa*	Herb	FACW
Fragrant-Golden-Rod,Flat-Top			Steeple-Bush		
Carex vulpinoidea	Herb	OBL	*Sambucus canadensis*	Shrub	FACW-
Sedge,Fox			Elder,American		
Acer rubrum	Shrub	FAC			
Maple,Red					

Percent of Dominant Species that are OBL, FACW or FAC: **(excluding FAC-)** 5/5 = 100.00%

FAC Neutral: 3/3 = 100.00%
Numeric Index: 11/5 = 2.20

Remarks:
The vegetation is mowed

HYDROLOGY

NO **Recorded Data(Describe In Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- NO **Saturated In Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns In Wetlands**

Secondary Indicators (2 or more required):
- YES **Oxidized Root Channels In Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- YES **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site:	Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner:	City of Albany		**County:** Albany
Investigators:	John Greaves & Bryan Hunter		**State:** New York
			Plot ID: 3

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-6	A	10YR2/1	N/A	N/A	N/A	Loamy sand
7-9	Be	10YR2/1	2.5Y7/1	Common	Distinct	Sandy loam
10+	B	2.5Y7/1	10YR2/1	Common	Distinct	Loamy sand
			10YR6/6	Common	Distinct	

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	YES **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
YES **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 4

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Successional Old Field
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Upl B
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag B-106

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Lonicera tatarica	Herb	FACU*	*Aster novi-belgii*	Herb	FACW+
Honeysuckle,Tartarian			Aster,New York		
Lonicera tatarica	Shrub	FACU*	*Galium mollugo*	Herb	NI
Honeysuckle,Tartarian			fales baby's breath		
Spiraea tomentosa	Herb	FACW	*Solidago canadensis*	Herb	FACU
Steeple-Bush			Golden-Rod,Canada		
Acer rubrum	Shrub	FAC	*Euthamia graminifolia*	Herb	FAC
Maple,Red			Fragrant-Golden-Rod,Flat-Top		
Acer rubrum	Herb	FAC			
Maple,Red					

Percent of Dominant Species that are OBL, FACW or FAC:	**FAC Neutral:** 2/5 = 40.00%
(excluding FAC-) 5/8 = 62.50%	**Numeric Index:** 25/8 = 3.13

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- NO **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- NO **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 4

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No
Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-6	A	10YR4/2	N/A	N/A	N/A	Sandy loam
7+	B	10YR5/6	10YR4/2	Common	Distinct	Sandy loam

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	NO **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
NO **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes) No	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 5

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Shrub Swamp
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Wet B
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag B-39

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Spiraea tomentosa	Herb	FACW	*Galium mollugo*	Herb	NI
Steeple-Bush			Galium mollugo		
Rubus hispidus	Herb	FACW	*Cornus foemina*	Shrub	FAC
Blackberry,Bristly			Dogwood,Stiff		
Euthamia graminifolia	Herb	FAC	*Salix alba*	Shrub	FACW
Fragrant-Golden-Rod,Flat-Top			Willow,White		
Solidago rugosa	Herb	FAC	*Viburnum dentatum*	Shrub	FAC
Golden-Rod,Wrinkled			Arrow-Wood		
Vitis labrusca	Vine	FACU			
Grape,Fox					

Percent of Dominant Species that are OBL, FACW or FAC: **(excluding FAC-)** 7/8 = 87.50%

FAC Neutral: 3/4 = 75.00%
Numeric Index: 22/8 = 2.75

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	= 12 *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- YES **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- YES **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 5

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No
Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-10	A	2.5Y3/1	N/A	N/A	N/A	Sandy loam
11-24	B	10YR7/1	2.5Y3/1 10YR6/8	Few Common	Distinct Distinct	Sandy loam

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	YES **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
YES **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:
2.5Y 3/1 streaks

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 6

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Successional Old Field
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Upl B
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag B-39

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Galium mollugo	Herb	NI	*Euthamia graminifolia*	Herb	FAC
Galium mollugo			Fragrant-Golden-Rod,Flat-Top		
Daucus carota	Herb	NI	*Erigeron annuus*	Herb	FACU
Lace, Queen Anne's			Fleabane,White-Top		
Fragaria virginiana	Herb	FACU	*Vitis aestivalis*	Herb	FACU
Strawberry,Virginia			Grape,Summer		

Percent of Dominant Species that are OBL, FACW or FAC: 1/4 = 25.00%
(excluding FAC-)

FAC Neutral: 0/3 = 0.00%
Numeric Index: 15/4 = 3.75

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- NO **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- NO **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 6

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No
Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-5	A	2.5Y3/1	N/A	N/A	N/A	Sandy loam
6-11	B	2.5Y7/4	10YR6/8 2.5Y3/1	Few Few	Distinct Distinct	Sandy loam
12-24	C	10YR6/8	10YR6/8	N/A	N/A	Sandy loam

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	NO **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
NO **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:
2.5Y 3/1 streaking in B layer.
Soils dry and friable.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 7

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Reedgrass/Purple Loosestrife Marsh
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Wet B
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag B-44

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Phragmites australis	Herb	FACW	*Thalictrum pubescens*	Herb	FACW+
Reed,Common			Meadow-Rue,Tall		
Scirpus atrovirens	Herb	OBL	*Cornus foemina*	Herb	FAC
Bulrush,Green			Dogwood,Stiff		
Onoclea sensibilis	Herb	FACW	*Equisetum fluviatile*	Herb	OBL
Fern,Sensitive			Horsetail,Water		

Percent of Dominant Species that are OBL, FACW or FAC: (excluding FAC-) 6/6 = 100.00%

FAC Neutral: 5/5 = 100.00%

Numeric Index: 11/6 = 1.83

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	= 10 *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- YES **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- YES **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 7

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No
Profile Description

Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-12	A	2.5Y3/1	N/A	N/A	N/A	Sandy loam
13-16	B	10YR7/1	2.5Y3/1 10YR6/8	Few Common	Distinct Distinct	Sandy loam

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	YES **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
YES **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:
2.5Y 3/1 streaks in B layer

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 8

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Red maple hardwood swamp
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Wet B
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag B-128

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Acer rubrum	Tree	FAC	*Osmunda cinnamomea*	Herb	FACW
Maple,Red			Fern,Cinnamon		
Acer rubrum	Shrub	FAC	*Toxicodendron radicans*	Herb	FAC
Maple,Red			Ivy,Poison		
Acer rubrum	Herb	FAC	*Viburnum dentatum*	Shrub	FAC
Maple,Red			Arrow-Wood		
Populus deltoides	Tree	FAC	*Viburnum dentatum*	Herb	FAC
Cotton-Wood,Eastern			Arrow-Wood		
Populus deltoides	Shrub	FAC	*Cornus foemina*	Shrub	FAC
Cotton-Wood,Eastern			Dogwood,Stiff		
Populus deltoides	Herb	FAC	*Cornus foemina*	Herb	FAC
Cotton-Wood,Eastern			Dogwood,Stiff		
Symplocarpus foetidus	Herb	OBL	*Maianthemum canadense*	Herb	FAC-
Skunk-Cabbage			Wild-Lily-Of-The-Valley		
Osmunda claytoniana	Herb	FAC	*Osmunda regalis*	Herb	OBL
Fern,Interrupted			Fern,Royal		
Athyrium filix-femina	Herb	FAC	*Sphagnum sp.*	Herb	NI
Fern,Subarctic Lady			Moss,Sphagnum		

Percent of Dominant Species that are OBL, FACW or FAC: **FAC Neutral:** 3/3 = 100.00%
(excluding FAC-) 16/17 = 94.12% **Numeric Index:** 46/17 = 2.71

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	= 2 *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- YES **Inundated**
- YES **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- YES **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- YES **FAC-Neutral Test**
- YES **Other (Explain in Remarks)**

Remarks:
patchy inundated areas. Soils saturated to surface where not inundated. Hummocks. Exposed roots.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 8

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-3	O	10YR2/1	N/A	N/A	N/A	Loam, Decomposed leaves
4-6	A	2.5YR3/1	5YR5/6	Common	Distinct	Sand
			2.5YR4/8	Common	Distinct	
7+	B	2.5YR7/2	10YR2/1	Few	Distinct	Sandy loam
			10YR2/1	Common	Distinct	

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	YES **High Organic Content in Surface Layer in Sandy Soils**
YES **Sulfidic Odor**	YES **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
YES **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:
O layer is peaty not loam.
B layer also had 2.5YR 6/6 common/distinct mottles.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 9

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Pitch Pine-Oak Forest
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Upl B & C
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag B-128 & C-1

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Pinus resinosa	Tree	FACU	*Rosa rugosa*	Herb	FACU-
Pine,Red			Rose,Rugosa		
Quercus rubra	Tree	FACU-	*Prunus serotina*	Herb	FACU
Oak,Northern Red			Cherry,Black		
Quercus rubra	Shrub	FACU-	*Rubus allegheniensis*	Herb	FACU-
Oak,Northern Red			Blackberry,Allegheny		
Quercus alba	Tree	FACU-	*Betula populifolia*	Shrub	FAC
Oak,White			Birch,Gray		
Quercus alba	Shrub	FACU-	*Vaccinium corymbosum*	Shrub	FACW-
Oak,White			Blueberry,Highbush		
Pteridium aquilinum	Herb	FACU	*Maianthemum canadense*	Herb	FAC-
Fern,Bracken			Wild-Lily-Of-The-Valley		
Osmunda claytoniana	Herb	FAC			
Fern,Interrupted					

Percent of Dominant Species that are OBL, FACW or FAC:	**FAC Neutral:** 1/10 = 10.00%
(excluding FAC-) 3/13 = 23.08%	**Numeric Index:** 47/13 = 3.62

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- NO **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- NO **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site:	Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner:	City of Albany		**County:** Albany
Investigators:	John Greaves & Bryan Hunter		**State:** New York
			Plot ID: 9

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No
Profile Description

Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-8	A	10YR6/6	10YR2/1	Common	Distinct	Sandy loam
9+	B	10YR7/8	N/A	N/A	N/A	Sandy loam

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	NO **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
NO **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005	
Applicant/Owner: City of Albany		**County:** Albany	
Investigators: John Greaves & Bryan Hunter		**State:** New York	
		Plot ID: 10	

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Vernal Pool
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Wet C
Is the area a potential Problem Area?	Yes (No)	**Field Location:** near flag D-2
(If needed, explain on the reverse side)		

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Acer rubrum	Tree	FAC	*Betula populifolia*	Tree	FAC
Maple,Red			Birch,Gray		
Acer rubrum	Shrub	FAC	*Betula populifolia*	Shrub	FAC
Maple,Red			Birch,Gray		
Acer rubrum	Herb	FAC	*Carex stricta*	Herb	OBL
Maple,Red			Sedge,Uptight		
Osmunda cinnamomea	Herb	FACW	*Symplocarpus foetidus*	Herb	OBL
Fern,Cinnamon			Skunk-Cabbage		
Vaccinium corymbosum	Shrub	FACW-			
Blueberry,Highbush					

Percent of Dominant Species that are OBL, FACW or FAC: (excluding FAC-) 9/9 = 100.00%

FAC Neutral: 4/4 = 100.00%

Numeric Index: 21/9 = 2.33

Remarks:
All woody vegetation occurred along edge of the vernal pool. Only carex stricta occurred within the pool.

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	= 8 *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- YES **Inundated**
- YES **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- YES **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- YES **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- YES **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 10

SOILS

Map Unit Name (Series and Phase): Medihemists and Hydraquents, ponded
Map Symbol: Mh **Drainage Class:** very poorly drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): VIIIw **Field Observations Confirm Mapped Type?** (Yes) No
Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-2	O	10YR2/1	N/A	N/A	N/A	Loam
2-6	A	10YR2/1	N/A	N/A	N/A	Sandy clay loam
7-13	B	10YR2/1	N/A	N/A	N/A	Sandy clay loam
14+	C	2.5YR7/2	10YR2/1 2.5YR6/6	Common Common	Distinct Distinct	Sandy loam

Hydric Soil Indicators:

- NO **Histosol**
- NO **Histic Epipedon**
- NO **Sulfidic Odor**
- NO **Aquic Moisture Regime**
- NO **Reducing Conditions**
- YES **Gleyed or Low Chroma Colors**
- NO **Concretions**
- YES **High Organic Content in Surface Layer in Sandy Soils**
- YES **Organic Streaking in Sandy Soils**
- NO **Listed on Local Hydric Soils List**
- NO **Listed on National Hydric Soils List**
- NO **Other (Explain in Remarks)**

Remarks:
O layer was a peaty muck, not a loam. C layer 10YR 2/1 mottles were actually streaks.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is the Sampling Point within the 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:	Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner:	City of Albany		**County:** Albany
Investigators:	John Greaves & Bryan Hunter		**State:** New York
			Plot ID: 11

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Red maple hardwood swamp
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Wet C
Is the area a potential Problem Area?	Yes (No)	**Field Location:** near flag D-15
(If needed, explain on the reverse side)		

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Acer rubrum	Tree	FAC	*Viburnum dentatum*	Shrub	FAC
Maple,Red			Arrow-Wood		
Acer rubrum	Shrub	FAC	*Viburnum dentatum*	Herb	FAC
Maple,Red			Arrow-Wood		
Symplocarpus foetidus	Herb	OBL	*Trillium undulatum*	Herb	FACU*
Skunk-Cabbage			Trillium,Painted		
Osmunda cinnamomea	Herb	FACW	*Onoclea sensibilis*	Herb	FACW
Fern,Cinnamon			Fern,Sensitive		
Osmunda regalis	Herb	OBL	*Thalictrum pubescens*	Herb	FACW+
Fern,Royal			Meadow-Rue,Tall		
Carex stricta	Herb	OBL			
Sedge,Uptight					

Percent of Dominant Species that are OBL, FACW or FAC: (excluding FAC-) 10/11 = 90.91%

FAC Neutral: 6/7 = 85.71%

Numeric Index: 25/11 = 2.27

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	= 0.5 *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- YES **Inundated**
- YES **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- YES **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- YES **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:
Patchy inundated areas. In other areas soils saturated to surface.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 11

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-6	A	10YR2/1	N/A	N/A	N/A	Sandy loam
7-12	E	2.5Y7/1	5YR5/8 7.5YR6/8	Common Common	Distinct Distinct	Silt loam

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
YES **Sulfidic Odor**	YES **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
YES **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:
Also 10YR 2/1 streaks in E layer.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 12

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Rich Mesophytic Forest
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Upl C
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag D-15

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Quercus rubra	Tree	FACU-	*Trientalis borealis*	Herb	FAC
Oak,Northern Red			Starflower,American		
Quercus alba	Tree	FACU-	*Trillium undulatum*	Herb	FACU*
Oak,White			Trillium,Painted		
Prunus serotina	Tree	FACU	*Toxicodendron radicans*	Herb	FAC
Cherry,Black			Ivy,Poison		
Prunus serotina	Herb	FACU	*Geranium maculatum*	Herb	FACU
Cherry,Black			Crane's-Bill,Purple		
Acer saccharum	Tree	FACU-	*Alliaria petiolata*	Herb	FACU-
Maple,Sugar			Mustard,Garlic		
Acer rubrum	Tree	FAC	*Athyrium filix-femina*	Herb	FAC
Maple,Red			Fern,Subarctic Lady		
Osmunda claytoniana	Herb	FAC	*Rosa rugosa*	Herb	FACU-
Fern,Interrupted			Rose,Rugosa		
Viburnum dentatum	Shrub	FAC	*Lonicera tatarica*	Shrub	FACU*
Arrow-Wood			Honeysuckle,Tartarian		
Viburnum dentatum	Herb	FAC	*Viola papilionacea*	Shrub	FAC
Arrow-Wood			Violet,Common Blue		

Percent of Dominant Species that are OBL, FACW or FAC: (excluding FAC-) 8/18 = 44.44%

FAC Neutral: 0/10 = 0.00%

Numeric Index: 64/18 = 3.56

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- NO **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- NO **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site:	Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner:	City of Albany		**County:** Albany
Investigators:	John Greaves & Bryan Hunter		**State:** New York
			Plot ID: 12

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-4	A	10YR3/2	N/A	N/A	N/A	Sandy loam
5-12	B	10YR6/8	10YR3/2	Few	Distinct	Sandy loam

Hydric Soil Indicators:

NO **Histosol**
NO **Histic Epipedon**
NO **Sulfidic Odor**
NO **Aquic Moisture Regime**
NO **Reducing Conditions**
NO **Gleyed or Low Chroma Colors**
NO **Concretions**
NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Organic Streaking in Sandy Soils**
NO **Listed on Local Hydric Soils List**
NO **Listed on National Hydric Soils List**
NO **Other (Explain in Remarks)**

Remarks:
10YR 3/2 in B layer were streaks not mottles.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 14-Oct-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 13

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Red maple hardwood swamp
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Wet C
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag C-2

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Acer rubrum	Tree	FAC	*Carex stricta*	Herb	OBL
Maple,Red			Sedge,Uptight		
Acer rubrum	Shrub	FAC	*Impatiens capensis*	Herb	FACW
Maple,Red			Touch-Me-Not,Spotted		
Acer rubrum	Herb	FAC	*Vaccinium corymbosum*	Shrub	FACW-
Maple,Red			Blueberry,Highbush		
Cornus amomum	Shrub	FACW			
Dogwood,Silky					

Percent of Dominant Species that are OBL, FACW or FAC: **FAC Neutral:** 4/4 = 100.00%
(excluding FAC-) 7/7 = 100.00% **Numeric Index:** 16/7 = 2.29

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	= 0 *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- YES **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- YES **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- YES **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- YES **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 14-Oct-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 13

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No

Profile Description

Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc
>16"	O	10YR2/1	10YR4/6	Few Distinct	Loam

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
YES **Sulfidic Odor**	NO **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
NO **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:
O horizon was a mucky peat

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 14-Oct-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 14

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Rich Mesophytic Forest
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Upl C
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag C-2

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Acer saccharum	Tree	FACU-	*Quercus rubra*	Tree	FACU-
Maple,Sugar			Oak,Northern Red		
Acer saccharum	Shrub	FACU-	*Parthenocissus quinquefolia*	Vine	FACU
Maple,Sugar			Creeper,Virginia		
Acer saccharum	Herb	FACU-	*Berberis thunbergii*	Shrub	FACU
Maple,Sugar			Barberry,Japanese		
Toxicodendron radicans	Herb	FAC	*Berberis thunbergii*	Herb	FACU
Ivy,Poison			Barberry,Japanese		

Percent of Dominant Species that are OBL, FACW or FAC: 1/8 = 12.50%
(excluding FAC-)

FAC Neutral: 0/7 = 0.00%
Numeric Index: 31/8 = 3.88

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- NO **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- NO **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 14-Oct-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 14

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No

Profile Description

Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
3	A	2.5Y2.5/1	N/A	N/A	N/A	Silt loam
4+	B	10YR2/1	10YR6/6	Few	Distinct	Sandy loam

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	NO **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
NO **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:
Soils appear to be fill

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 14-Oct-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 15

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Shallow Emergent Marsh/Intermittens
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Wet D
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag F-3

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Lythrum salicaria	Herb	FACW+	*Acer rubrum*	Shrub	FAC
Loosestrife,Purple			Maple,Red		
Juncus effusus	Herb	FACW+	*Acer rubrum*	Herb	FAC
Rush,Soft			Maple,Red		
Impatiens capensis	Herb	FACW	*Onoclea sensibilis*	Herb	FACW
Touch-Me-Not,Spotted			Fern,Sensitive		
Acer rubrum	Tree	FAC	*Carex stricta*	Herb	OBL
Maple,Red			Sedge,Uptight		

Percent of Dominant Species that are OBL, FACW or FAC: **FAC Neutral:** 5/5 = 100.00%
(excluding FAC-) 8/8 = 100.00% **Numeric Index:** 18/8 = 2.25

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	+/- 1 *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- YES **Inundated**
- YES **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- YES **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- YES **FAC-Neutral Test**
- YES **Other (Explain in Remarks)**

Remarks:
Soils saturated to surface in wetland and flowing water in undefined channel within the wetland.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 14-Oct-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 15

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
>12"	A	10YR2/1	N/A	N/A	N/A	Loam

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
YES **Sulfidic Odor**	NO **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
YES **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:
Soils are a gravelly loam.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 14-Oct-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 16

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Successional Old Field
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Upl D
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Podophyllum peltatum	Herb	FACU	*Lonicera tatarica*	Shrub	FACU*
May-Apple			Honeysuckle,Tartarian		
Solidago rugosa	Herb	FAC	*Acer rubrum*	Herb	FAC
Golden-Rod,Wrinkled			Maple,Red		
Euthamia graminifolia	Herb	FAC	*Vitis aestivalis*	Vine	FACU
Fragrant-Golden-Rod,Flat-Top			Grape,Summer		
Solidago canadensis	Herb	FACU	*Rubus hispidus*	Herb	FACW
Golden-Rod,Canada			Blackberry,Bristly		
Onoclea sensibilis	Herb	FACW	*Cornus foemina*	Herb	FAC
Fern,Sensitive			Dogwood,Stiff		
Galium mollugo	Herb	NI	*Trifolium pratense*	Herb	FACU-
fales baby's breath			Clover,Red		
Fragaria virginiana	Herb	FACU	*Taraxacum officinale*	Herb	FACU-
Strawberry,Virginia			Dandelion,Common		
Lonicera tatarica	Herb	FACU*	*Lotus corniculatus*	Herb	FACU-
Honeysuckle,Tartarian			Trefoil,Birds-Foot		

Percent of Dominant Species that are OBL, FACW or FAC:	**FAC Neutral:** 2/11 = 18.18%
(excluding FAC-) 6/15 = 40.00%	**Numeric Index:** 52/15 = 3.47

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- NO **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- NO **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 14-Oct-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 16

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** (Yes) No
Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-11	A	10YR4/3	N/A	N/A	N/A	Silty clay loam
12-30	B	10YR6/1	7.5YR5/8 10YR4/3	Common Few	Distinct Distinct	Sandy loam

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	NO **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
NO **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:
A layer is gravelly. The 10YR 4/3 "mottles" in the B horizon are streaks, not mottles. Throughout this area we suspect former grading and past disturbance associated with the construction of the trailer park.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 18

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** stream/emergent wetland
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Wet F
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag I-30

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Impatiens capensis	Herb	FACW	*Lythrum salicaria*	Herb	FACW+
Touch-Me-Not,Spotted			Loosestrife,Purple		
Phragmites australis	Herb	FACW	*Salix alba*	Herb	FACW
Reed,Common			Willow,White		
Carex stricta	Herb	OBL			
Sedge,Uptight					

Percent of Dominant Species that are OBL, FACW or FAC: (excluding FAC-) 5/5 = 100.00%

FAC Neutral: 5/5 = 100.00%

Numeric Index: 9/5 = 1.80

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	+/- 1 *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- YES **Inundated**
- YES **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- YES **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- YES **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 20-May-2005
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 18

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, 3 to 8 % slopes
Map Symbol: CoB **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** Yes (No)
Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc
>12	A	10YR2/1	10YR5/8	Common Distinct	Sandy loam

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	NO **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
YES **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No	Is the Sampling Point within the 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:	Rapp Road Landfill	**Project No:** 13515	**Date:** 27-Mar-2006
Applicant/Owner:	City of Albany		**County:** Albany
Investigators:	John Greaves & Bryan Hunter		**State:** New York
			Plot ID: 19

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** shallow emergent marsh
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Wet G
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag A-5

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Panicum virgatum	Herb	FAC	*Phragmites australis*	Herb	FACW
Switchgrass			Reed,Common		
Salix discolor	Shrub	FACW	*Lythrum salicaria*	Herb	FACW+
Willow,Pussy			Loosestrife,Purple		
Populus deltoides	Shrub	FAC			
Cotton-Wood,Eastern					

Percent of Dominant Species that are OBL, FACW or FAC:	**FAC Neutral:** 3/3 = 100.00%
(excluding FAC-) 5/5 = 100.00%	**Numeric Index:** 12/5 = 2.40

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- NO **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- YES **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- YES **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 27-Mar-2006
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 19

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, rolling
Map Symbol: CoC **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** Yes (No)
Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-5	A	10YR3/4	N/A	N/A	N/A	Sandy loam
6-10	A2	2.5Y3/2	10YR3/4	Common	Faint	Sandy loam
			10YR2/1	Few	Faint	
11+	B	2.5Y2.5/1	10YR4/4	Few	Distinct	Sandy loam
			10YR3/6	Few	Distinct	

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	NO **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
YES **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:
after 14" hitting buried woody material

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 27-Mar-2006
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 20

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Successional Old Field
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Upl G
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag A-5

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Panicum virgatum	Herb	FAC	*NA*	Herb	NI
Switchgrass			Grass species		

Percent of Dominant Species that are OBL, FACW or FAC: (excluding FAC-) 1/1 = 100.00%

FAC Neutral: 0/0 = 0.00%

Numeric Index: 3/1 = 3.00

Remarks:
disturbed area from landfill operations

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- NO **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- NO **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 27-Mar-2006
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 20

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, rolling
Map Symbol: CoC **Drainage Class:** well drained
Taxonomy (Subgroup): IIIe
Mapped Hydric Inclusion?
Field Observations Confirm Mapped Type? Yes (No)

Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-7	A	10YR3/2	N/A	N/A	N/A	Sandy loam
8-11	A2	10YR5/6	N/A	N/A	N/A	Sandy loam
12+	B	2.5Y3/2	10YR5/6	Common	Distinct	Sandy loam

Hydric Soil Indicators:

NO **Histosol**
NO **Histic Epipedon**
NO **Sulfidic Odor**
NO **Aquic Moisture Regime**
NO **Reducing Conditions**
NO **Gleyed or Low Chroma Colors**
NO **Concretions**
NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Organic Streaking in Sandy Soils**
NO **Listed on Local Hydric Soils List**
NO **Listed on National Hydric Soils List**
NO **Other (Explain in Remarks)**

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes) No	Is the Sampling Point within the Wetland? Yes (No)
Wetland Hydrology Present?	Yes (No)	
Hydric Soils Present?	Yes (No)	

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION

Project Site: Rapp Rd Landfill Eastern Expansion	Date: 9/21/06
Applicant/Owner: City of Albany	County: Albany
Investigator: NF/MF	State: NY
Do normal conditions exist on site? Yes	Community ID: **S. Emergent Marsh**
Is the site significantly disturbed? No	Transect ID: Wetland AA
Is the area potential Problem Area? No (If needed, explain on reverse Determination Remarks)	Plot ID: A-25

VEGETATION:

Dominant Plant Species	Stratum	Indicator
Spotted touch-me-not (*Impatiens capensis*)	H	FACW
Sensitive fern (*Onoclea sensibilis*)	H	FACW
Quaking aspen (*Populus tremuloides*)	S	FACU
Clearweed (*Pilea pumila*)	H	FACW
White snakeroot (*Eupatorium rugosum*)	H	FACU-

Percent of Dominant Species that are OBL, FACW, or FAC = 60%
(excluding FAC-)

Remarks: Greater than 50% of the dominant vegetation is FAC, FACW, or OBL.

HYDROLOGY:

_____ Recorded Data (Describe in Remarks):
- _____ Stream, Lake, or Tide Gauge
- _____ Aerial Photographs
- _____ Other

_____ No Recorded Data

Wetland Hydrology Indicators:

Primary Indicators:
- _____ Inundation
- _____ Saturated in upper 12 inches
- _____ Water Marks
- _____ Drift Lines
- _____ Sediment Deposits
- _____ Drainage Patterns in Wetlands

Field Observations:
- Depth of Surface Water:
- Depth to Water in Pit:
- Depth to Saturated Soil: 3"

Secondary Indicators: (2 required)
- __X__ Oxidized Root Channels in Upper 12 inches
- ____ Water-stained Leaves
- ____ Local Soil Survey Data
- __X__ FAC-neutral Test
- ____ Other (Explain in Remarks)

Remarks: Hydrology indicators present.

SOILS:

Series and Phase: Adrian	Drainage Class: Very Poorly drained
Taxonomy (Subgroup): Terric Haplosaprists	Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (Inches)	Horizon	Matrix Color	Mottle Color/Contrast	Soil Texture
0-12	A	10YR 2/1	-	Loam
12+	B	10YR 3/1	10YR 4/2, C/F	Sand

Hydric Soil Indicators:

____ Histosol	_____ Concretions
____ Histic Epipedon	_____ High Organic Content in Surface Layer of Sandy Soils
____ Sulfidic Odor	__X__ Organic Streaking in Sandy Soil
____ Aquic Moisture Reg.	_____ Listed on Local Hydric Soils List
____ Reducing Conditions	_____ Listed on National Hydric Soils List
__X__ Gleyed or Low-Chroma Colors	_____ Other (Explain in Remarks)

Remarks: Hydric soils present.

WETLAND DETERMINATION:

Hydrophytic Vegetation Present? Yes Wetland Hydrology Present? Yes Hydric Soils Present? Yes	Is this sampling point within a wetland? Yes

Remarks: All three parameters Present.

DATA FORM
ROUTINE WETLAND DETERMINATION

Project/Site: Rapp Road Landfill Eastern Expansion	Date: 9/21/06
Applicant/Owner: City of Albany	County: Albany
Investigator: NF/MF	State: NY
Do normal conditions exist on site? Yes	Community ID: **S.N.H. Forest**
Is the site significantly disturbed? No	Transect ID: Upland AA
Is the area potential Problem Area? No (If needed, explain on reverse Determination Remarks)	Plot ID: A-25

VEGETATION:

Dominant Plant Species	Stratum	Indicator
White snakeroot (*Eupatorium rugosum*)	H	FACU-
Virginia creeper (*Parthenocissus quinquefolia*)	V	FACU
White pine (*Pinus strobus*)	T	FACU
Oriental bittersweet (*Celastrus orbiculatus*)	V	FACU-
Violet (*Viola sp.*)	H	UPL

Percent of Dominant Species that are OBL, FACW, or FAC= 0%
(excluding FAC-)

Remarks: Greater than 50% of the dominant vegetation is not FAC, FACW, or OBL.
Onoclea sensibilis and Acer rubrum also present but not dominant

HYDROLOGY:

_____ Recorded Data (Describe in Remarks):
- _____ Stream, Lake, or Tide Gauge
- _____ Aerial Photographs
- _____ Other

_____ No Recorded Data Available

Field Observations:
- Depth of Surface Water:
- Depth to Water in Pit:
- Depth to Saturated Soil:

Wetland Hydrology Indicators:

Primary Indicators:
- ____ Inundation
- ____ Saturated in upper 12 inches
- ____ Water Marks
- ____ Drift Lines
- ____ Sediment Deposits
- ____ Drainage Patterns in Wetlands

Secondary Indicators: (2 required)
- _____ Oxidized Root Channels in Upper 12 inches
- _____ Water -stained Leaves
- _____ Local Soil Survey Data
- _____ FAC-neutral Test
- _____ Other (Explain in Remarks)

Remarks: Hydrology indicators not present.

SOILS:

Series and Phase: Colonie	Drainage Class: Well drained to excessively drained
Taxonomy (Subgroup): Lamellic Udipsamments	Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (Inches)	Horizon	Matrix Color	Mottle Color/Contrast	Soil Texture
0-5	A	2.5Y 3/3	-	Sand
5+	B	10YR 4/4	-	Sand

Hydric Soil Indicators:

_____ Histosol	____ Concretions
_____ Histic Epipedon	____ High Organic Content in Surface Layer of Sandy Soils
_____ Sulfidic Odor	____ Organic Streaking in Sandy Soil
____ 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: Hydric soils not present.

WETLAND DETERMINATION:

Hydrophytic Vegetation Present? Yes Wetland Hydrology Present? No Hydric Soils Present? No	Is this sampling point within a wetland? No

Remarks: All three parameters are not present

DATA FORM
ROUTINE WETLAND DETERMINATION

Project Site: Rapp Rd Landfill Eastern Expansion	Date: 9/21/06
Applicant/Owner: City of Albany	County: Albany
Investigator: NF/MF	State: NY
Do normal conditions exist on site? Yes	Community ID: **R.M.H. Swamp**
Is the site significantly disturbed? No	Transect ID: Wetland AA
Is the area potential Problem Area? No (If needed, explain on reverse Determination Remarks)	Plot ID: A-40

VEGETATION:

Dominant Plant Species	Stratum	Indicator
Spotted touch-me-not (*Impatiens capensis*)	H	FACW
Sensitive fern (*Onoclea sensibilis*)	H	FACW
Red maple (*Acer rubrum*)	T	FAC
Cinnamon fern (*Osmunda cinnamomea*)	H	FACW
White snakeroot (*Eupatorium rugosum*)	H	FACU-

Percent of Dominant Species that are OBL, FACW, or FAC = 80%
(excluding FAC-)

Remarks: Greater than 50% of the dominant vegetation is FAC, FACW, or OBL.

HYDROLOGY:

_____ Recorded Data (Describe in Remarks):
- _____ Stream, Lake, or Tide Gauge
- _____ Aerial Photographs
- _____ Other

_____ No Recorded Data

Wetland Hydrology Indicators:

Primary Indicators:
- _____ Inundation
- __X__ Saturated in upper 12 inches
- _____ Water Marks
- _____ Drift Lines
- _____ Sediment Deposits
- _____ Drainage Patterns in Wetlands

Field Observations:
- Depth of Surface Water:
- Depth to Water in Pit:
- Depth to Saturated Soil: 6”

Secondary Indicators: (2 required)
- __X__ Oxidized Root Channels in Upper 12 inches
- ____ Water-stained Leaves
- ____ Local Soil Survey Data
- __X__ FAC-neutral Test
- ____ Other (Explain in Remarks)

Remarks: Hydrology indicators present.

SOILS:

Series and Phase: Adrian	Drainage Class: Very poorly drained
Taxonomy (Subgroup): Terric Haplosaprists	Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (Inches)	Horizon	Matrix Color	Mottle Color/Contrast	Soil Texture
0-28	A	10YR 2/1	10YR 3/6, F/F	Mucky loam
28+	B	2.5Y 3/1	10YR 3/6, M/D	Sand

Hydric Soil Indicators:

_X_ Histosol	_____ Concretions
____ Histic Epipedon	_____ High Organic Content in Surface Layer of Sandy Soils
____ Sulfidic Odor	_____ Organic Streaking in Sandy Soil
____ Aquic Moisture Reg.	_____ Listed on Local Hydric Soils List
____ Reducing Conditions	_____ Listed on National Hydric Soils List
_X_ Gleyed or Low-Chroma Colors	_____ Other (Explain in Remarks)

Remarks: Hydric soils present.

WETLAND DETERMINATION:

Hydrophytic Vegetation Present? Yes Wetland Hydrology Present? Yes Hydric Soils Present? Yes	Is this sampling point within a wetland? Yes

Remarks: All three parameters Present.

DATA FORM
ROUTINE WETLAND DETERMINATION

Project/Site: Rapp Road Landfill Eastern Expansion	Date: 9/21/06
Applicant/Owner: City of Albany	County: Albany
Investigator: NF/MF	State: NY
Do normal conditions exist on site? Yes	Community ID: **S.S.H. Forest**
Is the site significantly disturbed? No	Transect ID: Upland AA
Is the area potential Problem Area? No (If needed, explain on reverse Determination Remarks)	Plot ID: A-40

VEGETATION:

Dominant Plant Species	Stratum	Indicator
White snakeroot (*Eupatorium rugosum*)	H	FACU-
Common buckthorn (*Rhamnus cathartica*)	S	UPL
Red maple (*Acer rubrum*)	T	FAC
Oriental bittersweet (*Celastrus orbiculatus*)	V	FACU-
Violet (*Viola sp.*)	H	UPL

Percent of Dominant Species that are OBL, FACW, or FAC= 20%
(excluding FAC-)

Remarks: Greater than 50% of the dominant vegetation is not FAC, FACW, or OBL.

HYDROLOGY:

_____ Recorded Data (Describe in Remarks):
- _____ Stream, Lake, or Tide Gauge
- _____ Aerial Photographs
- _____ Other

_____ No Recorded Data Available

Field Observations:
- Depth of Surface Water:
- Depth to Water in Pit:
- Depth to Saturated Soil:

Wetland Hydrology Indicators:

Primary Indicators:
- ____ Inundation
- ____ Saturated in upper 12 inches
- ____ Water Marks
- ____ Drift Lines
- ____ Sediment Deposits
- ____ Drainage Patterns in Wetlands

Secondary Indicators: (2 required)
- _____ Oxidized Root Channels in Upper 12 inches
- _____ Water -stained Leaves
- _____ Local Soil Survey Data
- _____ FAC-neutral Test
- _____ Other (Explain in Remarks)

Remarks: Hydrology indicators not present.

SOILS:

Series and Phase: Colonie	Drainage Class: Well drained to excessively drained
Taxonomy (Subgroup): Lamellic Udipsamments	Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (Inches)	Horizon	Matrix Color	Mottle Color/Contrast	Soil Texture
0-9	A	10YR 2/2	-	Sandy loam
9+	B	10YR 3/3	-	Sand

Hydric Soil Indicators:

_____ Histosol	____ Concretions
_____ Histic Epipedon	____ High Organic Content in Surface Layer of Sandy Soils
_____ Sulfidic Odor	____ Organic Streaking in Sandy Soil
____ 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: Hydric soils not present.

WETLAND DETERMINATION:

Hydrophytic Vegetation Present? No Wetland Hydrology Present? No Hydric Soils Present? No	Is this sampling point within a wetland? No

Remarks: All three parameters are not present

DATA FORM
ROUTINE WETLAND DETERMINATION

Project Site: Rapp Rd Landfill Eastern Expansion	Date: 9/21/06
Applicant/Owner: City of Albany	County: Albany
Investigator: NF/MF	State: NY
Do normal conditions exist on site? Yes	Community ID: **S. Emergent Marsh**
Is the site significantly disturbed? No	Transect ID: Wetland AA
Is the area potential Problem Area? No (If needed, explain on reverse Determination Remarks)	Plot ID: A-76

VEGETATION:

Dominant Plant Species	Stratum	Indicator
Sensitive fern (*Onoclea sensibilis*)	H	FACW
Purple loosestrife (*Lythrum salicaria*)	H	FACW+
Common boneset (*Eupatorium perfoliatum*)	H	FACW+
Broadleaf cattail (Typha latifolia)	H	OBL
Spotted touch-me-not (*Impatiens capensis*)	H	FACW

Percent of Dominant Species that are OBL, FACW, or FAC = 100%
(excluding FAC-)

Remarks: Greater than 50% of the dominant vegetation is FAC, FACW, or OBL.

HYDROLOGY:

_____ Recorded Data (Describe in Remarks):
- _____ Stream, Lake, or Tide Gauge
- _____ Aerial Photographs
- _____ Other

_____ No Recorded Data

Wetland Hydrology Indicators:

Primary Indicators:
- _____ Inundation
- _____ Saturated in upper 12 inches
- _____ Water Marks
- _____ Drift Lines
- _____ Sediment Deposits
- _____ Drainage Patterns in Wetlands

Field Observations:
- Depth of Surface Water:
- Depth to Water in Pit:
- Depth to Saturated Soil:

Secondary Indicators: (2 required)
- _X_ Oxidized Root Channels in Upper 12 inches
- ____ Water-stained Leaves
- ____ Local Soil Survey Data
- _X_ FAC-neutral Test
- ____ Other (Explain in Remarks)

Remarks: Two secondary hydrology indicators present.

SOILS:

Series and Phase: Adrian	Drainage Class: Very poorly drained
Taxonomy (Subgroup): Terric Haplosaprists	Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (Inches)	Horizon	Matrix Color	Mottle Color/Contrast	Soil Texture
0-2	A	10 YR 3/1	10YR 4/6, F/D	Sandy Loam
2+	B	2.5 Y 3/1	10YR 4/6, F/F	Sand

Hydric Soil Indicators:

____ Histosol	_____ Concretions
____ Histic Epipedon	__X__ High Organic Content in Surface Layer of Sandy Soils
____ Sulfidic Odor	_____ Organic Streaking in Sandy Soil
____ Aquic Moisture Reg.	_____ Listed on Local Hydric Soils List
____ Reducing Conditions	_____ Listed on National Hydric Soils List
__X__ Gleyed or Low-Chroma Colors	_____ Other (Explain in Remarks)

Remarks: Hydric soils present.

WETLAND DETERMINATION:

Hydrophytic Vegetation Present? Yes Wetland Hydrology Present? Yes Hydric Soils Present? Yes	Is this sampling point within a wetland? Yes

Remarks: All three parameters Present.

DATA FORM
ROUTINE WETLAND DETERMINATION

Project/Site: Rapp Road Landfill Eastern Expansion	Date: 9/21/06
Applicant/Owner: City of Albany	County: Albany
Investigator: NF/MF	State: NY
Do normal conditions exist on site? Yes	Community ID: **Succ. Old Field**
Is the site significantly disturbed? No	Transect ID: Upland AA
Is the area potential Problem Area? No (If needed, explain on reverse Determination Remarks)	Plot ID: A-76

VEGETATION:

Dominant Plant Species	Stratum	Indicator
Quaking aspen (*Populus tremoloides*)	S	FACU
Canada goldenrod (*Solidago Canadensis*)	H	FACU
Grass (*Poa sp.*)	H	UPL
Grape (*Vitis sp.*)	V	UPL

Percent of Dominant Species that are OBL, FACW, or FAC= 0%
(excluding FAC-)

Remarks: Greater than 50% of the dominant vegetation is not FAC, FACW, or OBL.

HYDROLOGY:

_____ Recorded Data (Describe in Remarks):
- _____ Stream, Lake, or Tide Gauge
- _____ Aerial Photographs
- _____ Other

_____ No Recorded Data Available

Wetland Hydrology Indicators:

Primary Indicators:
- ____ Inundation
- ____ Saturated in upper 12 inches
- ____ Water Marks
- ____ Drift Lines
- ____ Sediment Deposits
- ____ Drainage Patterns in Wetlands

Field Observations:
- Depth of Surface Water:
- Depth to Water in Pit:
- Depth to Saturated Soil:

Secondary Indicators: (2 required)
- _____ Oxidized Root Channels in Upper 12 inches
- _____ Water -stained Leaves
- _____ Local Soil Survey Data
- _____ FAC-neutral Test
- _____ Other (Explain in Remarks)

Remarks: Hydrology indicators not present.

SOILS:

Series and Phase: Colonie	Drainage Class: Well drained to excessively drained
Taxonomy (Subgroup): Lamellic Udipsamments	Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (Inches)	Horizon	Matrix Color	Mottle Color/Contrast	Soil Texture
0-2	A	10YR 3/2		Sandy Loam
2+	B	10YR 4/3	10YR 4/6, F/F	Sand

Hydric Soil Indicators:

_____ Histosol	____ Concretions
_____ Histic Epipedon	____ High Organic Content in Surface Layer of Sandy Soils
_____ Sulfidic Odor	____ Organic Streaking in Sandy Soil
____ 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: Hydric soils not present.

WETLAND DETERMINATION:

Hydrophytic Vegetation Present? No Wetland Hydrology Present? No Hydric Soils Present? No	Is this sampling point within a wetland? No

Remarks: All three parameters are not present

DATA FORM
ROUTINE WETLAND DETERMINATION

Project Site: Rapp Rd Landfill Eastern Expansion	Date: 9/21/06
Applicant/Owner: City of Albany	County: Albany
Investigator: NF/MF	State: NY
Do normal conditions exist on site? Yes	Community ID: **Shrub Swamp**
Is the site significantly disturbed? No	Transect ID: Wetland DD
Is the area potential Problem Area? No (If needed, explain on reverse Determination Remarks)	Plot ID: D-4

VEGETATION:

Dominant Plant Species	Stratum	Indicator
Jumpseed (*Polygonum virginianum*)	H	FAC
Red maple (*Acer rubrum*)	T	FAC
Gray dogwood (*Cornus foemina*)	S	FAC
Black cherry (*Prunus serotina*)	S	FACU

Percent of Dominant Species that are OBL, FACW, or FAC = 60%
(excluding FAC-)

Remarks: Greater than 50% of the dominant vegetation is FAC, FACW, or OBL.

HYDROLOGY:

_____ Recorded Data (Describe in Remarks):
- _____ Stream, Lake, or Tide Gauge
- _____ Aerial Photographs
- _____ Other

_____ No Recorded Data

Wetland Hydrology Indicators:

Primary Indicators:
- _____ Inundation
- __X__ Saturated in upper 12 inches
- _____ Water Marks
- _____ Drift Lines
- _____ Sediment Deposits
- _____ Drainage Patterns in Wetlands

Field Observations:
- Depth of Surface Water:
- Depth to Water in Pit:
- Depth to Saturated Soil: 3"

Secondary Indicators: (2 required)
- ____ Oxidized Root Channels in Upper 12 inches
- ____ Water-stained Leaves
- ____ Local Soil Survey Data
- ____ FAC-neutral Test
- ____ Other (Explain in Remarks)

Remarks: Hydrology indicators present.

SOILS:

Series and Phase: Granby	Drainage Class: Poorly drained, very poorly drained
Taxonomy (Subgroup): Typic Endoaquolls	Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (Inches)	Horizon	Matrix Color	Mottle Color/Contrast	Soil Texture
0-6	A	10YR 2/1	10YR 4/4, C/F	Loamy clay
6-12	B	10YR 2/2	10YR 4/6, F/F	Sand
12+	C	2.5Y 6/2	2.5Y 5/6, F/F	Sand

Hydric Soil Indicators:

____ Histosol	_____ Concretions
____ Histic Epipedon	_____ High Organic Content in Surface Layer of Sandy Soils
____ Sulfidic Odor	_____ Organic Streaking in Sandy Soil
____ Aquic Moisture Reg.	_____ Listed on Local Hydric Soils List
____ Reducing Conditions	_____ Listed on National Hydric Soils List
_X_ Gleyed or Low-Chroma Colors	_____ Other (Explain in Remarks)

Remarks: Hydric soils present.

WETLAND DETERMINATION:

Hydrophytic Vegetation Present? Yes Wetland Hydrology Present? Yes Hydric Soils Present? Yes	Is this sampling point within a wetland? Yes

Remarks: All three parameters Present.

DATA FORM
ROUTINE WETLAND DETERMINATION

Project/Site: Rapp Road Landfill Eastern Expansion	Date: 9/21/06
Applicant/Owner: City of Albany	County: Albany
Investigator: NF/MF	State: NY
Do normal conditions exist on site? Yes	Community ID: **Pitch Pine-Oak Forest**
Is the site significantly disturbed? No	Transect ID: Upland DD
Is the area potential Problem Area? No (If needed, explain on reverse Determination Remarks)	Plot ID: D-4

VEGETATION:

Dominant Plant Species	Stratum	Indicator
White snakeroot (*Eupatorium rugosum*)	H	FACU-
White pine (*Pinus strobus*)	T	FACU
Red oak (*Quercus rubra*)	T	FACU-
Oriental bittersweet (*Celastrus orbiculatus*)	V	FACU-
Black cherry (*Prunus serotina*)	S	FACU

Percent of Dominant Species that are OBL, FACW, or FAC= 0%
(excluding FAC-)

Remarks: Greater than 50% of the dominant vegetation is not FAC, FACW, or OBL.

HYDROLOGY:

_____ Recorded Data (Describe in Remarks):
- _____ Stream, Lake, or Tide Gauge
- _____ Aerial Photographs
- _____ Other

_____ No Recorded Data Available

Field Observations:
- Depth of Surface Water:
- Depth to Water in Pit:
- Depth to Saturated Soil:

Wetland Hydrology Indicators:

Primary Indicators:
- ____ Inundation
- ____ Saturated in upper 12 inches
- ____ Water Marks
- ____ Drift Lines
- ____ Sediment Deposits
- ____ Drainage Patterns in Wetlands

Secondary Indicators: (2 required)
- _____ Oxidized Root Channels in Upper 12 inches
- _____ Water -stained Leaves
- _____ Local Soil Survey Data
- _____ FAC-neutral Test
- _____ Other (Explain in Remarks)

Remarks: Hydrology indicators not present.

SOILS:

Series and Phase: Colonie	Drainage Class: Well drained to excessively drained
Taxonomy (Subgroup): Lamellic Udipsamments	Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (Inches)	Horizon	Matrix Color	Mottle Color/Contrast	Soil Texture
0-2	A	10YR 3/2	-	Sand
2-20	B	10YR 4/4	-	Sand

Hydric Soil Indicators:

_____ Histosol	____ Concretions
_____ Histic Epipedon	____ High Organic Content in Surface Layer of Sandy Soils
_____ Sulfidic Odor	____ Organic Streaking in Sandy Soil
____ 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: Hydric soils not present.

WETLAND DETERMINATION:

Hydrophytic Vegetation Present? No Wetland Hydrology Present? No Hydric Soils Present? No	Is this sampling point within a wetland? No

Remarks: All three parameters are not present

DATA FORM
ROUTINE WETLAND DETERMINATION

Project Site: Rapp Rd Landfill Eastern Expansion	Date: 9/21/06
Applicant/Owner: City of Albany	County: Albany
Investigator: NF/MF	State: NY
Do normal conditions exist on site? Yes	Community ID: **R. M. H. Swamp**
Is the site significantly disturbed? No	Transect ID: Wetland EE
Is the area potential Problem Area? No (If needed, explain on reverse Determination Remarks)	Plot ID: E-5

VEGETATION:

Dominant Plant Species	Stratum	Indicator
Red maple (*Acer rubrum*)	T	FAC
Spotted touch-me-not (*Impatiens capensis*)	H	FACW
Cinnamon fern (*Osmunda cinnamomea*)	H	FACW
Sphagnum moss (*Sphagnum sp.*)	H	N/A

Percent of Dominant Species that are OBL, FACW, or FAC = 100%
(excluding FAC-)

Remarks: Greater than 50% of the dominant vegetation is FAC, FACW, or OBL.

HYDROLOGY:

_____ Recorded Data (Describe in Remarks):
- _____ Stream, Lake, or Tide Gauge
- _____ Aerial Photographs
- _____ Other

_____ No Recorded Data

Wetland Hydrology Indicators:

Primary Indicators:
- _____ Inundation
- __X__ Saturated in upper 12 inches
- _____ Water Marks
- _____ Drift Lines
- _____ Sediment Deposits
- _____ Drainage Patterns in Wetlands

Field Observations:
- Depth of Surface Water:
- Depth to Water in Pit:
- Depth to Saturated Soil: 4"

Secondary Indicators: (2 required)
- ____ Oxidized Root Channels in Upper 12 inches
- ____ Water-stained Leaves
- ____ Local Soil Survey Data
- ____ FAC-neutral Test
- ____ Other (Explain in Remarks)

Remarks: Hydrology indicators present.

SOILS:

Series and Phase: Granby	Drainage Class: Poorly drained, very poorly drained
Taxonomy (Subgroup): Typic Endoaquolls	Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (Inches)	Horizon	Matrix Color	Mottle Color/Contrast	Soil Texture
0-22	A	10YR 2/1	-	Loam
22-28	B	10YR 3/2	10YR 4/6, F/F	Sand
28+	C	10YR 4/1	-	Sand

Hydric Soil Indicators:

_X_ Histosol	_____ Concretions
____ Histic Epipedon	_____ High Organic Content in Surface Layer of Sandy Soils
____ Sulfidic Odor	_X_ Organic Streaking in Sandy Soil
____ Aquic Moisture Reg.	_____ Listed on Local Hydric Soils List
____ Reducing Conditions	_____ Listed on National Hydric Soils List
_X_ Gleyed or Low-Chroma Colors	_____ Other (Explain in Remarks)

Remarks: Hydric soils present.

WETLAND DETERMINATION:

Hydrophytic Vegetation Present? Yes Wetland Hydrology Present? Yes Hydric Soils Present? Yes	Is this sampling point within a wetland? Yes

Remarks: All three parameters Present.

DATA FORM
ROUTINE WETLAND DETERMINATION

Project/Site: Rapp Road Landfill Eastern Expansion	Date: 9/21/06
Applicant/Owner: City of Albany	County: Albany
Investigator: NF/MF	State: NY
Do normal conditions exist on site? Yes	Community ID: **S.N.H. Forest**
Is the site significantly disturbed? No	Transect ID: Upland EE
Is the area potential Problem Area? No (If needed, explain on reverse Determination Remarks)	Plot ID: E-5

VEGETATION:

Dominant Plant Species	Stratum	Indicator
Japanese barberry (*Berberis thunbergii*)	S	FACU
Tatarian honeysuckle (Lonicera tatarica)	S	FACU
Virginia creeper (*Parthenocissus quinquefolia*)	V	FACU
Black cherry (*Prunus serotina*)	T	FACU
Violet (*Viola sp.*)	H	UPL

Percent of Dominant Species that are OBL, FACW, or FAC= 0%
(excluding FAC-)

Remarks: Greater than 50% of the dominant vegetation is not FAC, FACW, or OBL.

HYDROLOGY:

_____ Recorded Data (Describe in Remarks):

_____ Stream, Lake, or Tide Gauge

_____ Aerial Photographs

_____ Other

_____ No Recorded Data Available

Field Observations:

Depth of Surface Water:

Depth to Water in Pit:

Depth to Saturated Soil:

Wetland Hydrology Indicators:

Primary Indicators:

____ Inundation

____ Saturated in upper 12 inches

____ Water Marks

____ Drift Lines

____ Sediment Deposits

____ Drainage Patterns in Wetlands

Secondary Indicators: (2 required)

_____ Oxidized Root Channels in Upper 12 inches

_____ Water -stained Leaves

_____ Local Soil Survey Data

_____ FAC-neutral Test

_____ Other (Explain in Remarks)

Remarks: Hydrology indicators not present.

SOILS:

Series and Phase: Colonie	Drainage Class: Well drained to excessively drained
Taxonomy (Subgroup): Lamellic Udipsamments	Field Observations Confirm Mapped Type? Yes

Profile Description:

Depth (Inches)	Horizon	Matrix Color	Mottle Color/Contrast	Soil Texture
0-4	A	10YR 3/2	-	Sand
4-12	B	10YR 3/4	-	Sand

Hydric Soil Indicators:

_____ Histosol	____ Concretions
_____ Histic Epipedon	____ High Organic Content in Surface Layer of Sandy Soils
_____ Sulfidic Odor	____ Organic Streaking in Sandy Soil
____ 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: Hydric soils not present.

WETLAND DETERMINATION:

Hydrophytic Vegetation Present? No Wetland Hydrology Present? No Hydric Soils Present? No	Is this sampling point within a wetland? No

Remarks: All three parameters are not present

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 27-Mar-2006
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 21

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** Vernal Pool
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Wet VP
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag VP-7

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Onoclea sensibilis	Herb	FACW	*Vaccinium corymbosum*	Shrub	FACW-
Fern,Sensitive			Blueberry,Highbush		
Osmunda regalis	Herb	OBL	*Betula populifolia*	Tree	FAC
Fern,Royal			Birch,Gray		
Viburnum dentatum	Shrub	FAC			
Arrow-Wood					

Percent of Dominant Species that are OBL, FACW or FAC: (excluding FAC-) 5/5 = 100.00%

FAC Neutral: 3/3 = 100.00%

Numeric Index: 11/5 = 2.20

Remarks:

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	+/- 0 *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- YES **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- YES **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 27-Mar-2006
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 21

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, rolling
Map Symbol: CoC **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** Yes (No)
Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-2	O	10YR3/1	N/A	N/A	N/A	Sand
3-12	A	10YR5/6	7.5YR5/8 10YR3/1	Common Few	Distinct Distinct	Sand
13+	B	2.5Y5/3	N/A	N/A	N/A	Sand

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	YES **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
YES **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:
O layer is a peaty sand.
The 10YR 3/1 in the A layer are organic streaks.

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	(Yes)	No	Is the Sampling Point within the 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: Rapp Road Landfill	**Project No:** 13515	**Date:** 27-Mar-2006
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 22

Do Normal Circumstances exist on the site?	(Yes) No	**Community ID:** successional northern hardwoods
Is the site significantly disturbed (Atypical Situation:)?	Yes (No)	**Transect ID:** Upl VP
Is the area a potential Problem Area?	Yes (No)	**Field Location:**
(If needed, explain on the reverse side)		near flag VP-7

VEGETATION **(USFWS Region No. 1)**

Dominant Plant Species(Latin/Common)	Stratum	Indicator	Plant Species(Latin/Common)	Stratum	Indicator
Betula populifolia	Tree	FAC	*Fragaria virginiana*	Herb	FACU
Birch,Gray			Strawberry,Virginia		
Acer rubrum	Tree	FAC	*Maianthemum racemosum*	Herb	NI
Maple,Red			Solomon's seal,False		
Pteridium aquilinum	Herb	FACU			
Fern,Bracken					

Percent of Dominant Species that are OBL, FACW or FAC: **FAC Neutral:** 0/2 = 0.00%
(excluding FAC-) 2/4 = 50.00% **Numeric Index:** 14/4 = 3.50

Remarks:
Gray birch and red maples are saplings not trees.

HYDROLOGY

NO **Recorded Data(Describe in Remarks):**
- N/A **Stream, Lake or Tide Gauge**
- N/A **Aerial Photographs**
- N/A **Other**

YES **No Recorded Data**

Field Observations

Depth of Surface Water:	N/A *(in.)*
Depth to Free Water in Pit:	N/A *(in.)*
Depth to Saturated Soil:	N/A *(in.)*

Wetland Hydrology Indicators

Primary Indicators
- NO **Inundated**
- NO **Saturated in Upper 12 Inches**
- NO **Water Marks**
- NO **Drift Lines**
- NO **Sediment Deposits**
- NO **Drainage Patterns in Wetlands**

Secondary Indicators (2 or more required):
- NO **Oxidized Root Channels in Upper 12 Inches**
- NO **Water-Stained Leaves**
- NO **Local Soil Survey Data**
- NO **FAC-Neutral Test**
- NO **Other (Explain in Remarks)**

Remarks:

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Rapp Road Landfill	**Project No:** 13515	**Date:** 27-Mar-2006
Applicant/Owner: City of Albany		**County:** Albany
Investigators: John Greaves & Bryan Hunter		**State:** New York
		Plot ID: 22

SOILS

Map Unit Name (Series and Phase): Colonie loamy fine sand, rolling
Map Symbol: CoC **Drainage Class:** well drained **Mapped Hydric Inclusion?**
Taxonomy (Subgroup): IIIe **Field Observations Confirm Mapped Type?** Yes (No)
Profile Description

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Color (Munsell Moist)	Mottle Abundance/Contrast		Texture, Concretions, Structure, etc
0-10	A	10YR3/2	N/A	N/A	N/A	Sandy loam
11+	B	10YR5/8	7.5YR4/6	Common	Distinct	Sand

Hydric Soil Indicators:

NO **Histosol**	NO **Concretions**
NO **Histic Epipedon**	NO **High Organic Content in Surface Layer in Sandy Soils**
NO **Sulfidic Odor**	NO **Organic Streaking in Sandy Soils**
NO **Aquic Moisture Regime**	NO **Listed on Local Hydric Soils List**
NO **Reducing Conditions**	NO **Listed on National Hydric Soils List**
NO **Gleyed or Low Chroma Colors**	NO **Other (Explain in Remarks)**

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes (No)	Is the Sampling Point within the Wetland? Yes (No)
Wetland Hydrology Present?	Yes (No)	
Hydric Soils Present?	Yes (No)	

Remarks:

Wetland A – existing wetland mitigation area/shallow emergent marsh

Upland area adjacent to Wetland A – successional northern hardwoods community

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 1

CHA # 12206

Wetland B – shallow emergent marsh community near flag B-106

Wetland B – red maple hardwood swamp community near flag B-127

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 2	CHA # 12206

Wetland B – red maple hardwood swamp community near flag B-105

Wetland B – reedgrass/purple loosestrife marsh community near flag B-43

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 3	CHA # 12206

Upland B/C – pitch pine-oak forest near flag B-127 and C-1

Wetland B - ditch/artificial intermittent stream near flag B-86

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 4	CHA # 12206

Wetland C – vernal pool community, near flag C-1

Wetland C – red maple hardwood swamp community near flag D-15

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 5	CHA # 12206

Upland C – rich mesophytic forest near flag D-15

Wetland/stream channel D – near flag F-2

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 6	CHA # 12206

Upland D & AA – successional old field near flag F-1

Wetland AA – reedgrass/purple loosestrife marsh (background) near flag E-4

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 7	CHA # 12206

Wetland F – ditch/artificial intermittent stream channel and shallow emergent marsh

Wetland G – shallow emergent marsh community

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 8	CHA # 12206

Area delineated by flags BBB-1 to BBB-10 – common reed and forested wetland

Wetland VP – vernal pool community

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 9

CHA # 12206

Upland VP – early successional northern hardwoods forest

Wetland AA – red maple hardwood swamp community

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 10	CHA # 12206

Wetland AA – red maple hardwood swamp community

Wetland AA – red maple hardwood swamp community

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 11

CHA # 12206

Upland AA – successional northern hardwoods community

Upland AA - pitch pine-oak forest community

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 12

CHA # 12206

Wetland AA – reedgrass/purple loosestrife marsh community

Stream channel that flows through Wetland AA, near flag A- 2

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 13	CHA # 12206

Stream channel that flows through Wetland AA, near flag A- 25

Wetland AA – shallow emergent marsh community along utility R.O.W.

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 14	CHA # 12206

Upland AA – successional old field community (foreground) along utility R.O.W.

Wetand DD – shrub swamp community

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 15

CHA # 12206

Upland DD – pitch pine-oak forest community

Wetland EE – red maple hardwood swamp community

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SITE PHOTOGRAPHS

Rapp Road Landfill Expansion
Albany County, NY

Sheet 16

CHA # 12206

Attachment C – Wetland
Delineation Map