U.S. Army Corps of Engineers – Charleston District - Regulatory Division

# JURISDICTIONAL DETERMINATION REQUEST

**For Identifying Waters of the U.S., Including Wetlands and Tributaries**

Project Name: Midlands Technical College Enterprise Campus Date: 25 September 2012

County: Richland Total Acreage of Tract: 130 acres

| | |
|---|---|
| Property Owner :Midlands Technical College<br>Address: 151 Powell Road<br>Address: Columbia SC 29203<br>Phone: 803 691-3885<br>Email: leddbettert@midlandstech.edu<br>Attn: Mr. Tom Ledbetter | Agent: Thomas G. Ballou<br>Address: Ballou Associates<br>Address: 6326 St Andrews Rd Columbia SC 29212<br>Phone: 803 331-9371<br>Email: tballou@usit.net |

**Information Required to Accompany Request -** Check the items submitted - forward as much information as is available. At a minimum, the first two items must be forwarded:

__X__ Accurate Location Maps (from County Map, USGS Quad Sheet, etc.)

__X__ Survey Plat or Tax Map of the Property in Question

__X__ Soil Survey Sheet (from USDA-NRCS) or Aerial Photo (from County Assessor's Office or other source).

__X__ Property boundaries should be shown on the soil survey / photo.

___ Topographic Survey

___ Conceptual Site Plan for the Overall Development

___ Description of the proposed use of the property

__X__ Status of the project: No development plans at this time.

**Type of Determination Requested -** Choose one:

__X__ Preliminary – Preliminary determinations will identify whether wetlands or other waters are present on the site and will presume that they are jurisdictional. This type of determination is likely to be made more quickly and require less information be submitted.

___ Approved – Approved determinations will identify whether wetlands or other waters are present on the site and will include a determination of their jurisdictional status. This type of determination is likely to take longer and require more detailed information be submitted.

**IMPORTANT NOTE: Legible printed name and signature required. The person signing this form must be the present property owner or have the specific authority of the property owner to authorize Corps of Engineers employees or their agents to enter onto the property for on-site investigations if such is deemed necessary. Do not sign this form unless you are the owner, or have the specific authority of the property owner.**

**PRINTED NAME of person signing this form, below: Thomas G. Ballou**

**Signature of Property Owner or Authorized Agent:** _____


HQ and South Branch
69-A Hagood Avenue
Charleston, SC 29403
843-329-8044

Northwest Branch
1835 Assembly St., Room 865-B1
Columbia, SC 29201
803-253-3444

Northeast Branch
1949 Industrial Park Rd, Rm 140
Conway, SC 29526
843-365-4239

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Midlands Tech College Enterprise Campus City/County: Richland Sampling Date: 12 April 2012

Applicant/Owner: Midlands Technical College State: SC Sampling Point: Upland

Investigator(s): Thomas G. Ballou Section, Township, Range:

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1-2%

Subregion (LRR or MLRA): LRR P Lat: 34.102598°N Long: 80.979206°W Datum:

Soil Map Unit Name: Lakeland sand NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ☒ | No ☐ | **Is the Sampled Area within a Wetland?** Yes ☐ No ☒ |
| Hydric Soil Present? | Yes ☐ | No ☒ | |
| Wetland Hydrology Present? | Yes ☐ | No ☒ | |

Remarks:

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ☐ | No ☒ | Depth (inches): |
| Water Table Present? | Yes ☐ | No ☒ | Depth (inches): |
| Saturation Present? (includes capillary fringe) | Yes ☐ | No ☒ | Depth (inches): |

**Wetland Hydrology Present?** Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION –** Use scientific names of plants. Sampling Point: Upland

| Tree Stratum (Plot size: 30-ft radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. Pinus tadea | 35 | yes | Fac |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 35 = Total Cover | | |
| **Sapling Stratum** (Plot size: ) | | | |
| 1. Acer rubrum | 10 | yes | Fac |
| 2. Liquidamber styraciflua | 10 | yes | Fac |
| 3. Prunus serotina | 10 | yes | Facu |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 30 = Total Cover | | |
| **Shrub Stratum** (Plot size: ) | | | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | = Total Cover | | |
| **Herb Stratum** (Plot size: ) | | | |
| 1. Pteridium aquilinum | 15 | yes | Facu |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| | 15 = Total Cover | | |
| **Woody Vine Stratum** (Plot size: ) | | | |
| 1. Vitis rotundifolia | 10 | yes | Fac |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 10 = Total Cover | | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: | |
|---|---|---|---|
| OBL species | | x 1 = | |
| FACW species | | x 2 = | |
| FAC species | | x 3 = | |
| FACU species | | x 4 = | |
| UPL species | | x 5 = | |
| Column Totals: | (A) | | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

Remarks: (If observed, list morphological adaptations below).

**SOIL**

Sampling Point: Upland

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10Y/R 4/1 | | | | | | loam | |
| 4-18+ | 10YR 5/3 | | | | | | sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) **(LRR T, U)**
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ☐ **No** ☒

Remarks:

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Midlands Tech College Enterprise Campus City/County: Richland Sampling Date: 12 April 2012

Applicant/Owner: Midlands Technical College State: SC Sampling Point: Wetland 1

Investigator(s): Thomas G. Ballou Section, Township, Range:

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1-2%

Subregion (LRR or MLRA): LRR P Lat: 34.105121° N Long: 80.981013° W Datum:

Soil Map Unit Name: Johnston loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ☒ | No ☐ | **Is the Sampled Area within a Wetland?** Yes ☒ No ☐ |
| Hydric Soil Present? | Yes ☒ | No ☐ | |
| Wetland Hydrology Present? | Yes ☒ | No ☐ | |

Remarks:

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☒ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☒ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☒ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 2

**Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION –** Use scientific names of plants.

Sampling Point: Wetland 1

| Tree Stratum (Plot size: 30-ft radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. Acer rubrum | 25 | yes | Fac |
| 2. Liquidamber styraciflua | 25 | yes | Fac |
| 3. Liriodendron tulipifera | 10 | yes | Fac |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 60 | = Total Cover | |
| **Sapling Stratum** (Plot size: ) | | | |
| 1. Acer rubrum | 10 | yes | Fac |
| 2. Liquidamber styraciflua | 10 | yes | Fac |
| 3. Magnolia virginiana | 10 | yes | Facw |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 30 | = Total Cover | |
| **Shrub Stratum** (Plot size: ) | | | |
| 1. Myrica cerifera | 15 | yes | Facw |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | | = Total Cover | |
| **Herb Stratum** (Plot size: ) | | | |
| 1. Osmunda cinnamomea | 15 | yes | Facw |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| | 15 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: ) | | | |
| 1. Smilax | 10 | yes | Fac |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 10 | = Total Cover | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 9 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: | |
|---|---|---|---|
| OBL species | | x 1 = | |
| FACW species | | x 2 = | |
| FAC species | | x 3 = | |
| FACU species | | x 4 = | |
| UPL species | | x 5 = | |
| Column Totals: | (A) | | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

Remarks: (If observed, list morphological adaptations below).

**SOIL**

Sampling Point: Wetland 1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-5 | 10Y/R2/1 | | | | | | loam | mucky |
| 5-18+ | 10YR 4/1 | | | | | | sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☒ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) **(LRR T, U)**
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ☒ **No** ☐

Remarks:

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Midlands Tech College Enterprise Campus City/County: Richland Sampling Date: 12 April 2012

Applicant/Owner: Midlands Technical College State: SC Sampling Point: Wetland 2

Investigator(s): Thomas G. Ballou Section, Township, Range:

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1-2%

Subregion (LRR or MLRA): LRR P Lat: 34.103591° N Long: 80.978489° W Datum:

Soil Map Unit Name: Johnston loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | |
|---|---|---|
| Hydrophytic Vegetation Present? | Yes ☒ No ☐ | **Is the Sampled Area within a Wetland?** Yes ☒ No ☐ |
| Hydric Soil Present? | Yes ☒ No ☐ | |
| Wetland Hydrology Present? | Yes ☒ No ☐ | |

Remarks:

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☒ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☒ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☒ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ☒ | No ☐ | Depth (inches): 1-2 |
| Water Table Present? | Yes ☒ | No ☐ | Depth (inches): 0-6 |
| Saturation Present? (includes capillary fringe) | Yes ☒ | No ☐ | Depth (inches): 0-6 |

**Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION –** Use scientific names of plants. Sampling Point: Wetland 2

| Tree Stratum (Plot size: 30-ft radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. Acer rubrum | 25 | yes | Fac |
| 2. Liquidamber styraciflua | 20 | yes | Fac |
| 3. Liriodendron tulipifera | 15 | yes | Fac |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 60 | = Total Cover | |
| **Sapling Stratum** (Plot size: ) | | | |
| 1. Acer rubrum | 10 | yes | Fac |
| 2. Liquidamber styraciflua | 10 | yes | Fac |
| 3. Magnolia virginiana | 15 | yes | Facw |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 35 | = Total Cover | |
| **Shrub Stratum** (Plot size: ) | | | |
| 1. Myrica cerifera | 15 | yes | Facw |
| 2. Leucothoe racemosa | 10 | yes | Facw |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | | = Total Cover | |
| **Herb Stratum** (Plot size: ) | | | |
| 1. Osmunda cinnamomea | 15 | yes | Facw |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| | 15 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: ) | | | |
| 1. Smilax | 10 | yes | Fac |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 10 | = Total Cover | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 10 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | Multiply by: |
|---|---|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes [X] No [ ]

Remarks: (If observed, list morphological adaptations below).

**SOIL**

Sampling Point: Wetland 2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-5 | 10Y/R2/1 | | | | | | loam | mucky |
| 5-18+ | 10YR 4/1 | | | | | | sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☒ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) **(LRR T, U)**
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ☒ **No** ☐

Remarks:

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Midlands Tech College Enterprise Campus City/County: Richland Sampling Date: 12 April 2012

Applicant/Owner: Midlands Technical College State: SC Sampling Point: Wetland 3

Investigator(s): Thomas G. Ballou Section, Township, Range:

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1-2%

Subregion (LRR or MLRA): LRR P Lat: 34.103825°N Long: 80.975164°W Datum:

Soil Map Unit Name: Fuquay sand NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ☒ | No ☐ | **Is the Sampled Area within a Wetland?** Yes ☒ No ☐ |
| Hydric Soil Present? | Yes ☒ | No ☐ | |
| Wetland Hydrology Present? | Yes ☒ | No ☐ | |

Remarks:

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ☐ | No ☒ | Depth (inches): |
| Water Table Present? | Yes ☐ | No ☒ | Depth (inches): |
| Saturation Present? (includes capillary fringe) | Yes ☒ | No ☐ | Depth (inches): 7 |

**Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION –** Use scientific names of plants. Sampling Point: Wetland 3

| Tree Stratum (Plot size: 30-ft radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. Acer rubrum | 15 | yes | Fac |
| 2. Liquidamber styraciflua | 20 | yes | Fac |
| 3. Liriodendron tulipifera | 15 | yes | Fac |
| 4. Pinus taeda | 15 | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 65 | = Total Cover | |
| **Sapling Stratum** (Plot size: ) | | | |
| 1. Acer rubrum | 10 | yes | Fac |
| 2. Liquidamber styraciflua | 10 | yes | Fac |
| 3. Magnolia virginiana | 10 | yes | Facw |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 35 | = Total Cover | |
| **Shrub Stratum** (Plot size: ) | | | |
| 1. Myrica cerifera | 10 | yes | Facw |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | | = Total Cover | |
| **Herb Stratum** (Plot size: ) | | | |
| 1. Osmunda cinnamomea | 15 | yes | Facw |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| | 15 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: ) | | | |
| 1. Smilax | 10 | yes | Fac |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 10 | = Total Cover | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 10 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | Multiply by: |
|---|---|
| OBL species | x 1 = |
| FACW species | x 2 = |
| FAC species | x 3 = |
| FACU species | x 4 = |
| UPL species | x 5 = |
| Column Totals: (A) | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes [X] No [ ]

Remarks: (If observed, list morphological adaptations below).

**SOIL**

Sampling Point: Wetland 3

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-2 | 10Y/R 3/1 | | | | | | loam | |
| 2-18+ | 10YR 5/1 | | | | | | clay sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☒ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) **(LRR T, U)**
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ☒ **No** ☐

Remarks:

## WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: Midlands Tech College Enterprise Campus City/County: Richland Sampling Date: 12 April 2012

Applicant/Owner: Midlands Technical College State: SC Sampling Point: Wetland 4

Investigator(s): Thomas G. Ballou Section, Township, Range:

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1-2%

Subregion (LRR or MLRA): LRR P Lat: 34.099242°N Long: 80.974176°W Datum:

Soil Map Unit Name: Johnston loam NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

| | | | |
|---|---|---|---|
| Hydrophytic Vegetation Present? | Yes ☒ | No ☐ | **Is the Sampled Area within a Wetland?** Yes ☒ No ☐ |
| Hydric Soil Present? | Yes ☒ | No ☐ | |
| Wetland Hydrology Present? | Yes ☒ | No ☐ | |

Remarks:

### HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☒ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) **(LRR U)**
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

**Field Observations:**

| | | | |
|---|---|---|---|
| Surface Water Present? | Yes ☒ | No ☐ | Depth (inches): 1-2 |
| Water Table Present? | Yes ☒ | No ☐ | Depth (inches): 0-6 |
| Saturation Present? (includes capillary fringe) | Yes ☒ | No ☐ | Depth (inches): 0-2 |

**Wetland Hydrology Present?** Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION –** Use scientific names of plants. Sampling Point: Wetland 4

| Tree Stratum (Plot size: 30-ft radius) | Absolute % Cover | Dominant Species? | Indicator Status |
|---|---|---|---|
| 1. Acer rubrum | 15 | yes | Fac |
| 2. Liquidamber styraciflua | 20 | yes | Fac |
| 3. Liriodendron tulipifera | 15 | yes | Fac |
| 4. Pinus taeda | 15 | yes | Fac |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 65 | = Total Cover | |
| **Sapling Stratum** (Plot size: ) | | | |
| 1. Acer rubrum | 10 | yes | Fac |
| 2. Liquidamber styraciflua | 10 | yes | Fac |
| 3. Magnolia virginiana | 10 | yes | Facw |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | 35 | = Total Cover | |
| **Shrub Stratum** (Plot size: ) | | | |
| 1. Myrica cerifera | 10 | yes | Facw |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| | | = Total Cover | |
| **Herb Stratum** (Plot size: ) | | | |
| 1. Osmunda cinnamomea | 15 | yes | Facw |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| | 15 | = Total Cover | |
| **Woody Vine Stratum** (Plot size: ) | | | |
| 1. Smilax | 10 | yes | Fac |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| | 10 | = Total Cover | |

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 10 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

| Total % Cover of: | | Multiply by: | |
|---|---|---|---|
| OBL species | | x 1 = | |
| FACW species | | x 2 = | |
| FAC species | | x 3 = | |
| FACU species | | x 4 = | |
| UPL species | | x 5 = | |
| Column Totals: | (A) | | (B) |

Prevalence Index = B/A =

**Hydrophytic Vegetation Indicators:**

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

Remarks: (If observed, list morphological adaptations below).

**SOIL**

Sampling Point: Wetland 4

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

| Depth (inches) | Matrix Color (moist) | % | Redox Features Color (moist) | % | Type[1] | Loc[2] | Texture | Remarks |
|---|---|---|---|---|---|---|---|---|
| 0-4 | 10Y/R 2/1 | | | | | | loam | |
| 4-18+ | 10YR 4/1 | | | | | | clay sand | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☒ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

**Indicators for Problematic Hydric Soils[3]:**

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12) **(LRR T, U)**
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: _____

Depth (inches): _____

**Hydric Soil Present?** **Yes** ☒ **No** ☐

Remarks:


## WETLAND APPROXIMATION

TOTAL SITE AREA = 130ACRES
WETLAND AREA 1 = 0.84ACRE
WETLAND AREA 2 = 4.27ACRES
WETLAND AREA 3 = 0.78ACRE
WETLAND AREA 4 = 1.40ACRE
TOTAL WETLAND AREA = 7.29ACRES

400 0 400 800 1200
scale in feet
1" = 400'

PO Box 11504
Columbia, SC 29211

1330 Lady Street, Suite 205
Columbia, SC 29201
(803) 744-4500 (Main)
(803) 744-4501 (Fax)
www.genesis-consulting-group.com

GENESIS
CONSULTING GROUP

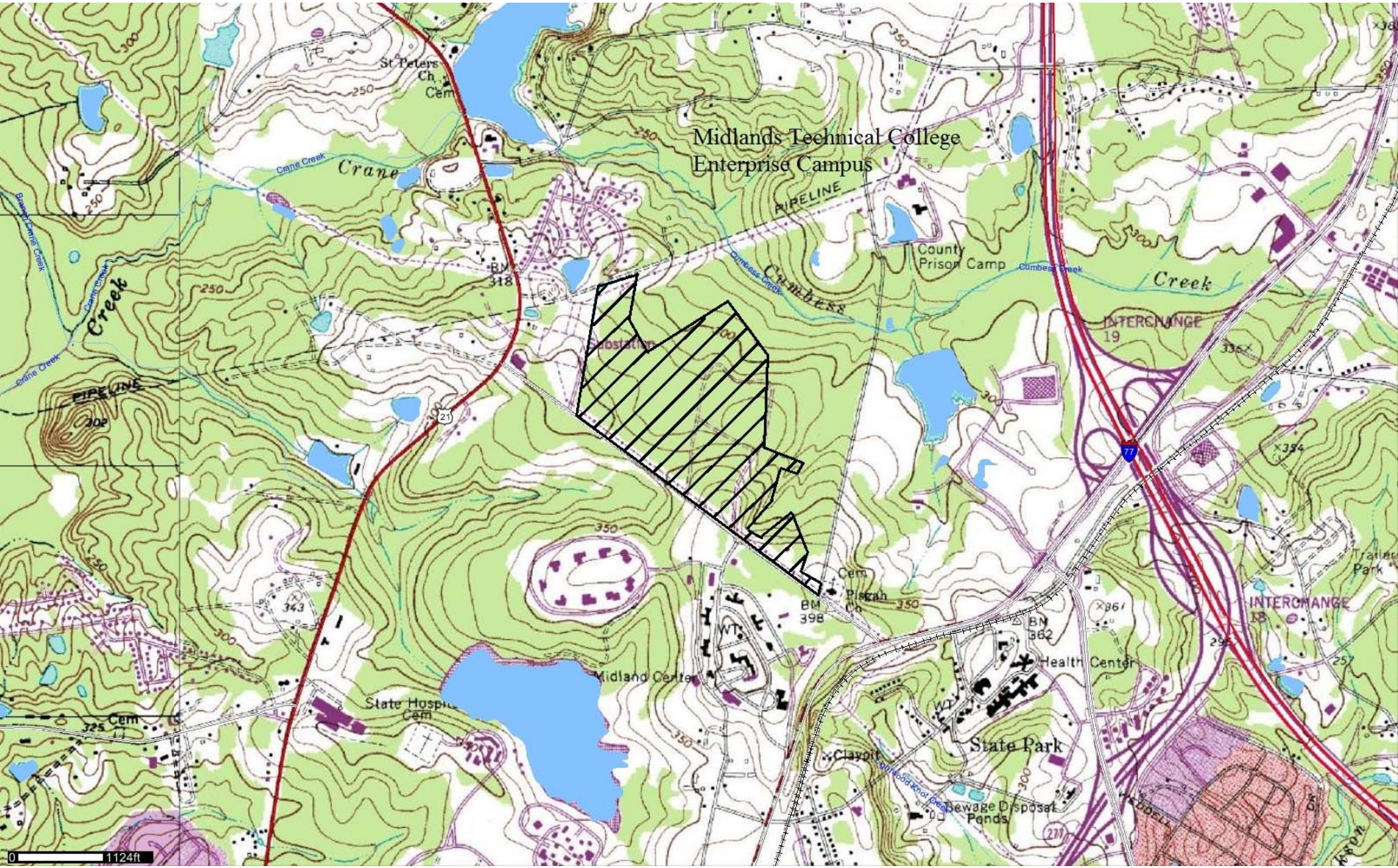
Project Title / Client Information
**MTC ENTERPRISE CAMPUS**
COLUMBIA, SC

| Revisions | | |
|---|---|---|
| No. | Name | Date |

Drawing Information
Project No. 12-271
Drawn by
AMM
Date
05.05.12
Checked By
DXB
Date
05.05.12
Approved By
KRK

Drawing Title
**WETLAND APPROXIMATION**

Drawing No.

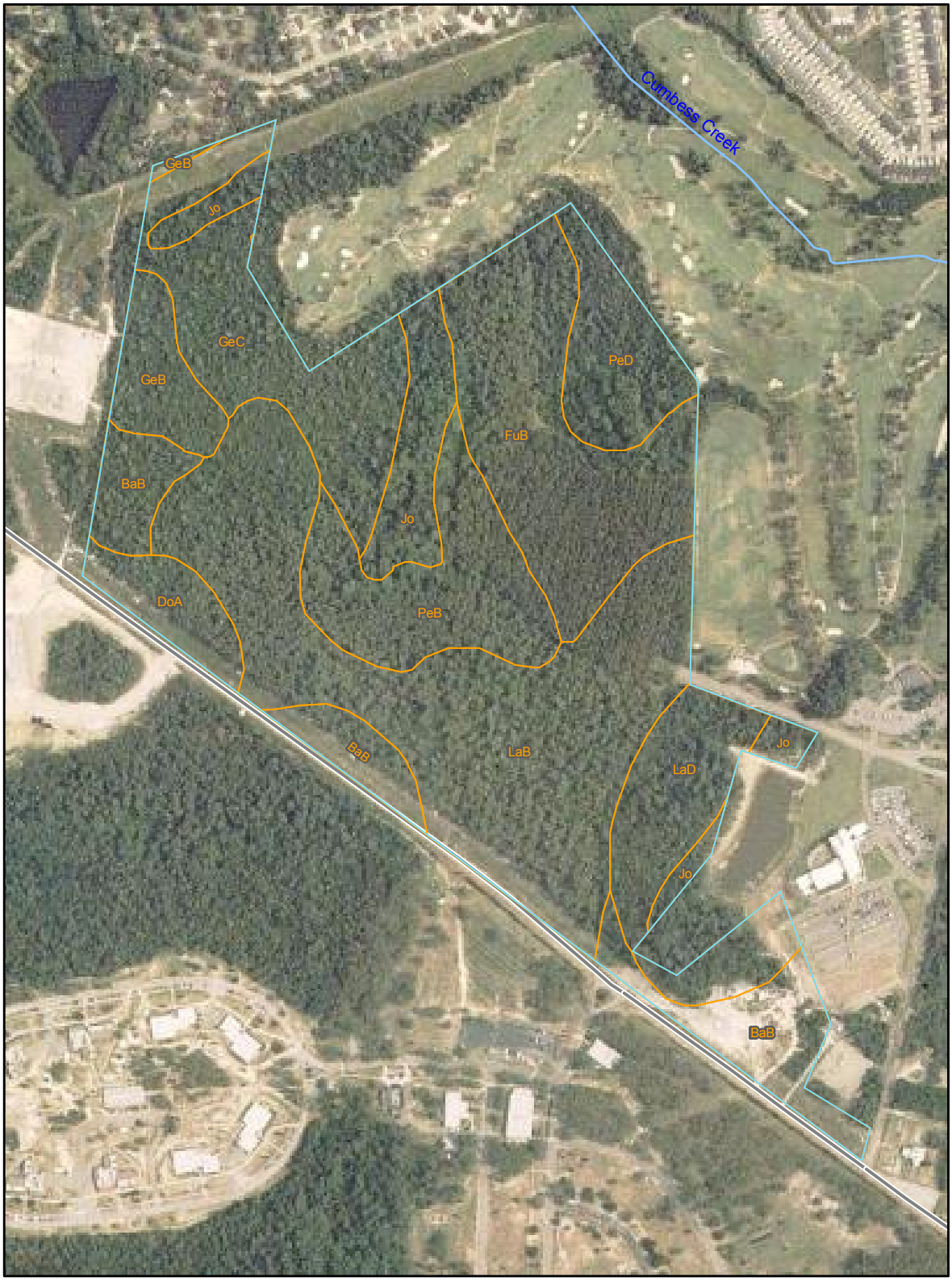

Midlands Technical College
Enterprise Campus
St Peters Ch Cem
Crane Creek
Crane
PIPELINE
BM 318
Crumbess Creek
Crumbess
County Prison Camp
Creek
INTERCHANGE 19
Substation
Cem
Pisgah Ch
BM 398
Midland Center
State Hospital Cem
Health Center
State Park
Claypit
Sewage Disposal Ponds
INTERCHANGE 18
Trailer Park
0
1124ft

80° 59' 1"

80° 58' 16"

34° 6' 27"

34° 5' 37"




Map Scale: 1:7,420 if printed on A size (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 250 500 1,000 1,500

## MAP LEGEND

**Area of Interest (AOI)**
- Area of Interest (AOI)

**Soils**
- Soil Map Units

**Special Point Features**
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

**Special Line Features**
- Gully
- Short Steep Slope
- Other

**Political Features**
- Cities

**Water Features**
- Streams and Canals

**Transportation**
- Rails
- Interstate Highways
- US Routes
- Major Roads

## MAP INFORMATION

Map Scale: 1:7,420 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 17N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

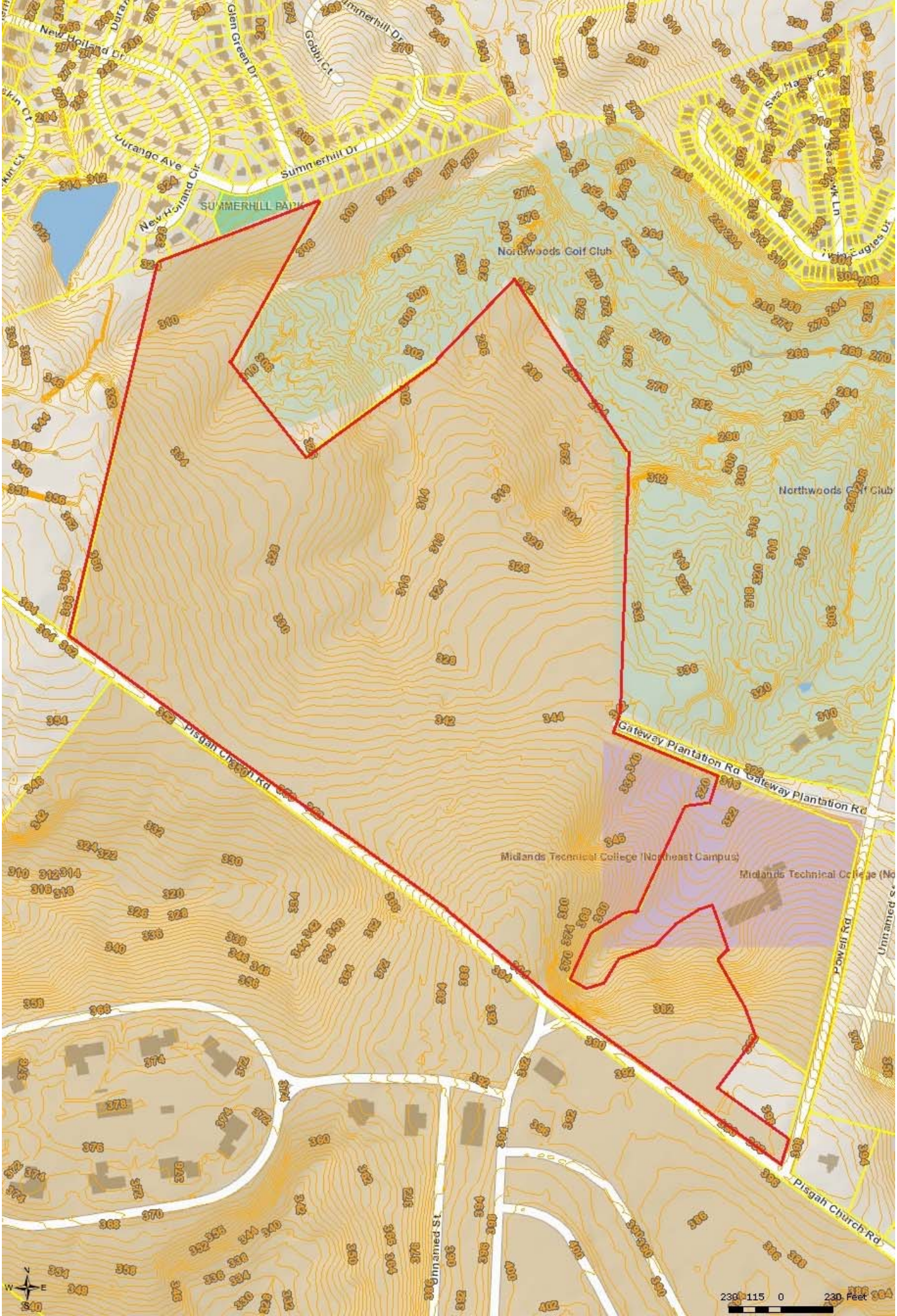
Soil Survey Area: Richland County, South Carolina
Survey Area Data: Version 14, Oct 5, 2011

Date(s) aerial images were photographed: 7/11/2006

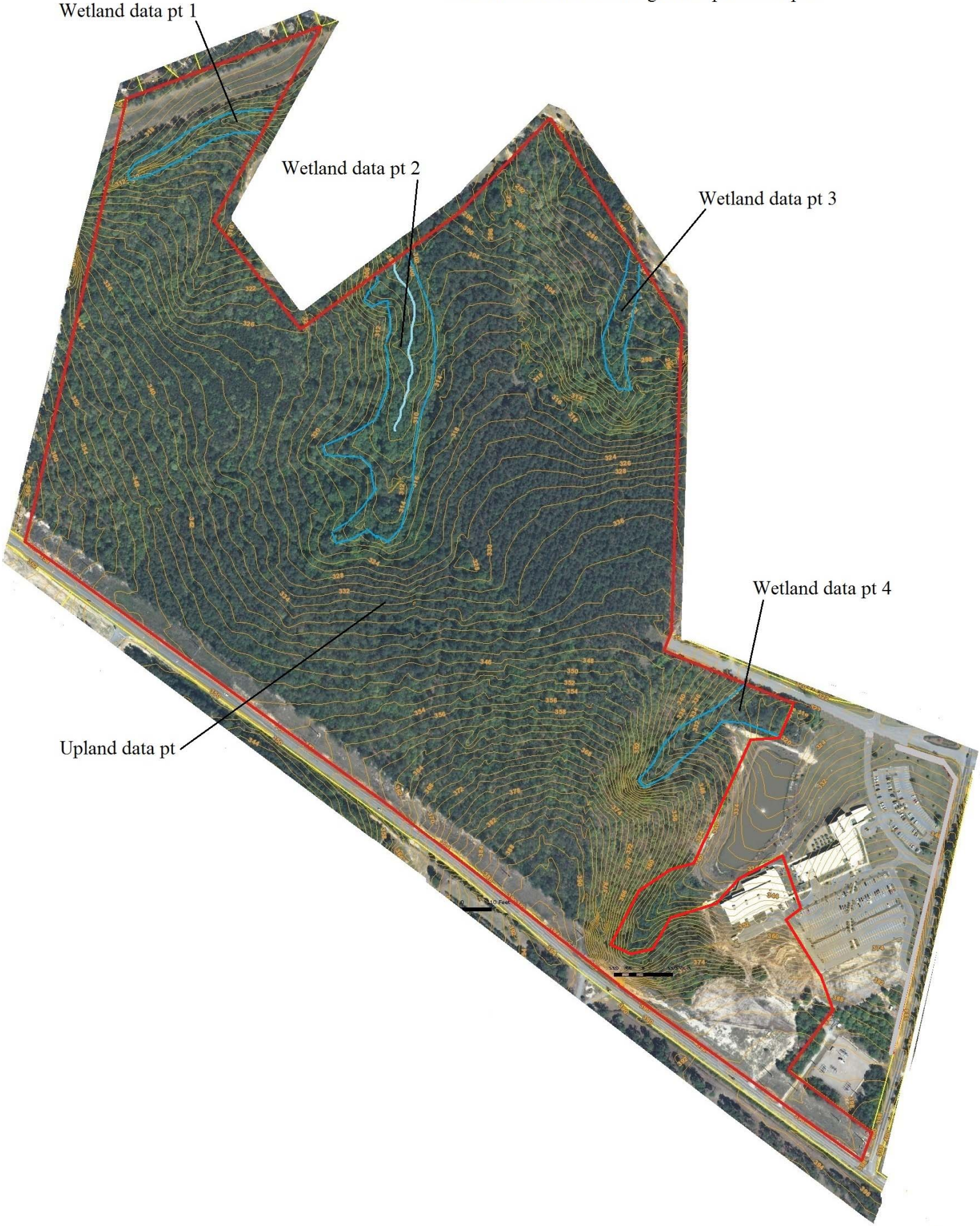
The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

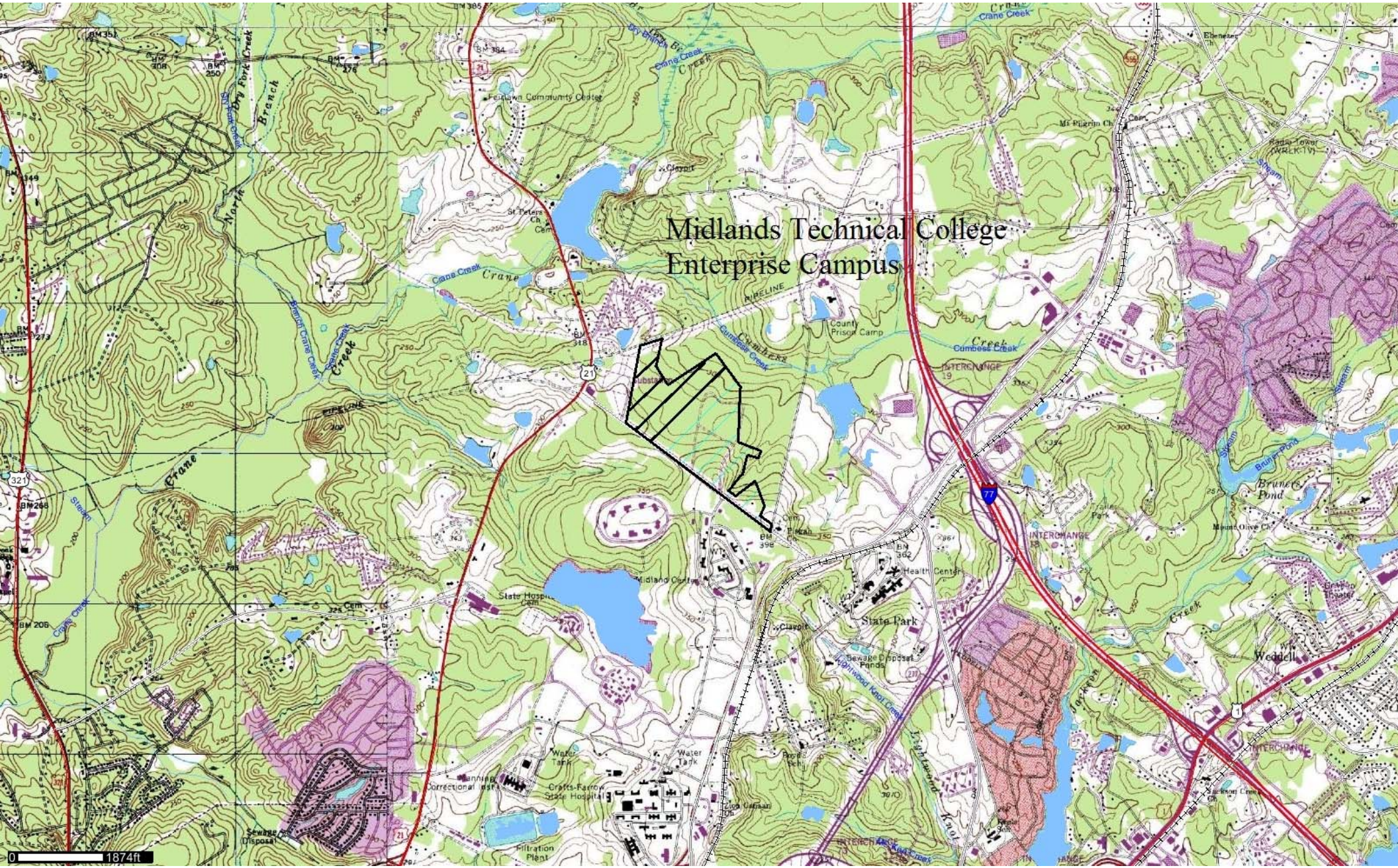
# Map Unit Legend

| Richland County, South Carolina (SC079) | | | |
|---|---|---|---|
| **Map Unit Symbol** | **Map Unit Name** | **Acres in AOI** | **Percent of AOI** |
| BaB | Blanton sand, 0 to 6 percent slopes | 12.4 | 9.5% |
| DoA | Dothan loamy sand, 0 to 2 percent slopes | 4.0 | 3.1% |
| FuB | Fuquay sand, 2 to 6 percent slopes | 19.4 | 14.9% |
| GeB | Georgeville silt loam, 2 to 6 percent slopes | 4.7 | 3.6% |
| GeC | Georgeville silt loam, 6 to 10 percent slopes | 14.8 | 11.4% |
| Jo | Johnston loam | 8.1 | 6.2% |
| LaB | Lakeland sand, 2 to 6 percent slopes | 37.4 | 28.8% |
| LaD | Lakeland sand, 10 to 15 percent slopes | 10.5 | 8.1% |
| PeB | Pelion loamy sand, 2 to 6 percent slopes | 11.9 | 9.2% |
| PeD | Pelion loamy sand, 6 to 15 percent slopes | 6.8 | 5.2% |
| **Totals for Area of Interest** | | **130.0** | **100.0%** |


Summerhill Dr
Gobbi Ct
Glen Green Dr
New Holland Dr
Durango Ave
New Holland Cir
SUMMERHILL PARK
Northwoods Golf Club
Northwoods Golf Club
Gateway Plantation Rd
Gateway Plantation Rd
Pisgah Church Rd
Midlands Technical College (Northeast Campus)
Midlands Technical College (No
Powell Rd
Unnamed St
Pisgah Church Rd
230 115 0 230 Feet

Midlands Technical College Enterprise Campus




Midlands Technical College
Enterprise Campus
0
1874ft

RECEIVED APR 2 3 2007

DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
69A Hagood Avenue
CHARLESTON, SOUTH CAROLINA 29403-5107

REPLY TO
ATTENTION OF

April 16, 2007

Regulatory Division

Terracon
Attn: Chuck Clymer
521 Clemson Road
Columbia SC 29229

Re: 2006-3458-5JZ
Richland County

Dear Mr. Clymer:

This is in response to your letter of November 1, 2006, requesting a wetland determination, on behalf of Midlands Technical College, for a 149.716 acre tract located off of Pisgah Church Road, between Powell Road and Wilson Boulevard in Richland County, South Carolina. The project area is depicted on the drawing you submitted which was prepared by BP Barber & Associates, dated November 2, 2006, and entitled "Midlands Technical College Wetlands Survey".

This drawing depicts approximate boundaries of wetlands or other waters of the United States as established by your office. You have requested that this office verify the accuracy of this mapping as a representation of wetlands or other waters of the United States within the regulatory authority of this office. The property in question contains 5.598 acres of freshwater wetlands.

Furthermore, in the wake of the recent Supreme Court combined decisions issued June 19, 2006 in Rapanos v. United States and Carabell v. the U.S. Army Corps of Engineers, the U.S. Army Corps of Engineers and the Environmental Protection Agency are examining the scope, methodology, and documentation of jurisdictional determinations (JDs) pursuant to the Clean Water Act (CWA). In order to allow the Corps and EPA to prepare and issue substantive guidance, the Charleston District is, in accordance with guidance from our Headquarters and to the extent circumstances allow, delaying making final CWA jurisdictional determinations for areas beyond the limits of traditional navigable waters (Section 10 waters) until new guidance is issued.

With regard to your request, this office has reviewed the information you have provided regarding CWA jurisdiction over the property described above. Based upon the regulations and guidance available to this agency prior to the decisions in Rapanos v. United States and Carabell v. the U.S. Army Corps of Engineers, it appears that the proposed jurisdictional boundaries you have provided to this office are a reasonable approximation of the location and boundaries of the wetlands or other waters of the United States found on this site. However, until final guidance is issued, the Corps will not be able to make a final determination of the limits of CWA jurisdiction on the referenced property. This letter should be used for general planning purposes only and any expenditures based on this letter are at the recipient's own risk. In addition, once final guidance has been received, this office will re-evaluate this request for compliance with that guidance and at the recipient's request, will provide a letter verifying our final determination.

This jurisdictional determination is NOT an appealable action under the Corps of Engineers administrative appeal procedures defined at 33 CFR 331. Placement of dredged material within waters of the United States, including jurisdictional wetlands, without a Department of the Army permit is a violation of Section 301 of the Clean Water Act (33 USC 1311).

If a permit application is forthcoming as a result of this delineation, a copy of this letter should be submitted as part of the application. Otherwise, a delay could occur in confirming that a delineation was performed for the permit project area.

In future correspondence concerning this matter, please refer to 2006-3458-5JZ. You may still need state or local assent. Prior to performing any work, you should contact the South Carolina Department of Health and Environmental Control, Bureau of Water.

If you have any questions concerning this matter, please contact me at (803) 253-3902.

Respectfully,

Laura M. Boos

Laura M. Boos
Project Manager

Enclosure:
Basis for Jurisdiction

JURISDICTIONAL DETERMINATION
U.S. Army Corps of Engineers

Revised 8/13/04

**DISTRICT OFFICE:** SAC
**FILE NUMBER:** 2006-3458-5JZ

**PROJECT LOCATION INFORMATION:**
State: South Carolina
County: Richland
Center coordinates of site (latitude/longitude): 34.1015654/-80.9764610
Approximate size of area (parcel) reviewed, including uplands: 149.716 acres.
Name of nearest waterway: Cumbers Creek
Name of watershed: Broad

**JURISDICTIONAL DETERMINATION**
**Completed:** Desktop determination ☐ Date:
Site visit(s) ☒ Date(s): 12-15-06

**Jurisdictional Determination (JD):**

☒ Preliminary JD - Based on available information, ☒ *there appear to be* (or) ☐ *there appear to be no* "waters of the United States" and/or "navigable waters of the United States" on the project site. A preliminary JD is not appealable (Reference 33 CFR part 331).

☐ Approved JD – An approved JD is an appealable action (Reference 33 CFR part 331).
Check all that apply:

☐ *There are* "navigable waters of the United States" (as defined by 33 CFR part 329 and associated guidance) within the reviewed area. Approximate size of jurisdictional area: .

☐ *There are* "waters of the United States" (as defined by 33 CFR part 328 and associated guidance) within the reviewed area. Approximate size of jurisdictional area: .

☐ *There are "isolated, non-navigable, intra-state* waters or wetlands" within the reviewed area.
☐ Decision supported by SWANCC/Migratory Bird Rule Information Sheet for Determination of No Jurisdiction.

**BASIS OF JURISDICTIONAL DETERMINATION:**
**A. Waters defined under 33 CFR part 329 as "navigable waters of the United States":**
☐ The presence of waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

**B. Waters defined under 33 CFR part 328.3(a) as "waters of the United States":**
☐ (1) The presence of waters, which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
☒ (2) The presence of interstate waters including interstate wetlands[1].
☐ (3) The presence of other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate commerce including any such waters (check all that apply):
☐ (i) which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ (iii) which are or could be used for industrial purposes by industries in interstate commerce.
☐ (4) Impoundments of waters otherwise defined as waters of the US.
☒ (5) The presence of a tributary to a water identified in (1) – (4) above.
☐ (6) The presence of territorial seas.
☒ (7) The presence of wetlands adjacent[2] to other waters of the US, except for those wetlands adjacent to other wetlands.

**Rationale for the Basis of Jurisdictional Determination (applies to any boxes checked above).** *If the jurisdictional water or wetland is not itself a navigable water of the United States, describe connection(s) to the downstream navigable waters. If B(1) or B(3) is used as the Basis of Jurisdiction, document navigability and/or interstate commerce connection (i.e., discuss site conditions, including why the waterbody is navigable and/or how the destruction of the waterbody could affect interstate or foreign commerce). If B(2, 4, 5 or 6) is used as the Basis of Jurisdiction, document the rationale used to make the determination. If B(7) is used as the Basis of Jurisdiction, document the rationale used to make adjacency determination:*
**This tract includes wetlands that flow into Cumbers Creek and a portion of Cumbers Creek, which flows into the Broad River, which joins with the Saluda River to form the Congaree River, a Navigable Water of the United States.**

**Lateral Extent of Jurisdiction:** (Reference: 33 CFR parts 328 and 329)

☒ Ordinary High Water Mark indicated by:
- ☐ clear, natural line impressed on the bank
- ☐ the presence of litter and debris
- ☐ changes in the character of soil
- ☐ destruction of terrestrial vegetation
- ☐ shelving
- ☐ other:

☐ High Tide Line indicated by:
- ☐ oil or scum line along shore objects
- ☐ fine shell or debris deposits (foreshore)
- ☐ physical markings/characteristics
- ☐ tidal gages
- ☐ other:

☐ Mean High Water Mark indicated by:
☐ survey to available datum; ☐ physical markings; ☐ vegetation lines/changes in vegetation types.

☒ Wetland boundaries, as shown on the attached wetland delineation map and/or in a delineation report prepared by: BP Barber & Associates

**Basis For Not Asserting Jurisdiction:**

☐ The reviewed area consists entirely of uplands.
☐ Unable to confirm the presence of waters in 33 CFR part 328(a)(1, 2, or 4-7).
☐ Headquarters declined to approve jurisdiction on the basis of 33 CFR part 328.3(a)(3).
☐ **The Corps has made a case-specific determination that the following waters present on the site are not Waters of the United States:**
- ☐ **Waste treatment systems, including treatment ponds or lagoons, pursuant to 33 CFR part 328.3.**
- ☐ **Artificially irrigated areas, which would revert to upland if the irrigation ceased.**
- ☐ **Artificial lakes and ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.**
- ☐ **Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons.**
- ☐ **Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States found at 33 CFR 328.3(a).**
- ☐ **Isolated, intrastate wetland with no nexus to interstate commerce.**
- ☐ **Prior converted cropland, as determined by the Natural Resources Conservation Service.**

**Explain rationale:**
- ☐ **Non-tidal drainage or irrigation ditches excavated on dry land. Explain rationale:**
- ☐ **Other (explain):**

**DATA REVIEWED FOR JURSIDICTIONAL DETERMINATION (mark all that apply):**

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant.
  - ☒ This office concurs with the delineation report, dated Nov. 1, 2006, prepared by (company): Terracon
  - ☐ This office does not concur with the delineation report, dated , prepared by (company):
- ☐ Data sheets prepared by the Corps.
- ☒ Corps' navigable waters' studies: 1977 Navigability Survey
- ☐ U.S. Geological Survey Hydrologic Atlas:
- ☒ U.S. Geological Survey 7.5 Minute Topographic maps: Fort Jackson North
- ☐ U.S. Geological Survey 7.5 Minute Historic quadrangles:
- ☐ U.S. Geological Survey 15 Minute Historic quadrangles:
- ☒ USDA Natural Resources Conservation Service Soil Survey: Map 22 (Fuquay)
- ☒ National wetlands inventory maps: U42P Upland planted pine
- ☐ State/Local wetland inventory maps:
- ☐ FEMA/FIRM maps (Map Name & Date):
- ☐ 100-year Floodplain Elevation is: (NGVD)
- ☒ Aerial Photographs (Name & Date): 1999/11206:92
- ☐ Other photographs (Date):
- ☐ Advanced Identification Wetland maps:
- ☒ Site visit/determination conducted on: 12-15-06
- ☐ Applicable/supporting case law:
- ☐ Other information (please specify):

**Signature: Project Manager** Laura M. Bass

[1]Wetlands are identified and delineated using the methods and criteria established in the Corps Wetland Delineation Manual (87 Manual) (i.e., occurrence of hydrophytic vegetation, hydric soils and wetland hydrology)

[2]The term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes, and the like are also adjacent.