

ATTACHMENT 6



WETLAND INVESTIGATION

May 27, 2014

Message Center Management, Inc.
40 Woodland Street
Hartford, CT 06105

APT Project No.: CT242330

Re: **Proposed Glastonbury Facility**
Candlewood Road
Glastonbury, Connecticut

All-Points Technology Corporation, P.C. ("APT") understands that a wireless telecommunications facility ("Facility") is proposed by Message Center Management, Inc. ("MCM") at Candlewood Road in Glastonbury, Connecticut ("Subject Property"). At your request, Matthew Gustafson, a Connecticut registered Soil Scientist with APT conducted an inspection of the Subject Property on April 3, 2014 to determine the presence or absence of wetlands and watercourses within approximately 200 feet of proposed development activities ("Study Area"). The delineation methodology followed was consistent with both the Connecticut Inland Wetlands and Watercourses Act (IWWA) and the *Corps of Engineers Wetland Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, Version 2.0 (January 2012). The results of this wetland investigation are provided below.

Site and Project Description:

The Subject Property, known as Seven J's Farm (Map E3, Block 0820, and Lot E0002), consists of an approximately 9-acre parcel developed as a horse farm. The area proposed for the wireless communications Facility is located in a mowed grass area adjacent to one of the farm's barns. Access to the Facility would travel along the Subject Property's paved access road off Candlewood Road then along a proposed short 20± gravel access to the Facility. The Study Area is dominated by the horse farm with associated fields and buildings along with a small man-made pond mostly bordered by maintained lawn. The surrounding land-use consists primarily of residential development.

One wetland area was delineated within the Study Area consisting of an intermittent stream system, hillside seep, and open water pond. Please refer to the enclosed Wetland Delineation Map for the approximate location of the identified wetland resource area. Wetlands were marked with pink and blue plastic flagging tape numbered with the following sequence: WF 1-01 to 1- 1-22 and WF 1-50 to 1- 61. General weather conditions encountered during the above-referenced inspection included low 40° F temperatures with sunny skies.

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Regulation of Wetlands:

Wetlands and watercourses are regulated by local, state and federal regulations, with each regulatory agency differing slightly in their definition and regulatory authority of resource areas, as discussed below. The proposed Facility is under the exclusive jurisdiction of the State of Connecticut Siting Council and therefore exempt from local regulation, although local wetland regulations are considered by the Siting Council. If wetlands are identified on the Subject Property and direct impact is proposed, those wetlands may be considered Waters of the United States and therefore the activity may also be subject to jurisdiction by the U.S. Army Corps of Engineers (“ACOE”) New England District.

Town of Glastonbury: The Town of Glastonbury regulates activities within wetlands and watercourses and within 150 feet of wetlands and watercourses through administration of the Connecticut Inland Wetlands and Watercourses Act (IWWA).

State of Connecticut: **Freshwater Wetlands:** The IWWA requires the regulation of activities affecting or having the potential to affect wetlands under Sec. 22a-36 through 22a-45 of the Connecticut General Statutes. The IWWA is administered through local municipalities. The IWWA defines wetlands as areas of poorly drained, very poorly drained, floodplain, and alluvial soils, as delineated by a soil scientist. Watercourses are defined as bogs, swamps, or marshes, as well as lakes, ponds, rivers, streams, etc., whether natural or man-made, permanent or intermittent. Intermittent watercourse determinations are based on the presence of a defined permanent channel and bank, and two of the following characteristics: (1) evidence of scour or deposits of recent alluvium or detritus; (2) the presence of standing or flowing water for a duration longer than a particular storm incident; and (3) the presence of hydrophytic vegetation.

ACOE: The U.S. Army Corps of Engineers regulates the discharge of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act. Waters of the United States are navigable waters, tributaries to navigable waters, wetlands adjacent to those waters, and/or isolated wetlands that have a demonstrated interstate commerce connection. The ACOE Wetlands Delineation Manual defines wetlands as “[t]hose areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) prohibits the unauthorized obstruction or alteration of any navigable water of the United States. This section provides that the construction of any structure in or over any navigable water of the United States, or the accomplishment of any other work affecting the course, location, condition, or physical capacity of such waters is unlawful unless the work has been approved by the ACOE.

Soil Description:

Soil types encountered throughout the Study Area were generally consistent with digitally available soil survey information obtained from the Natural Resources Conservation Service (“NRCS”)¹. Wetland soils were field identified to consist of Scarboro muck and Raypol silt loam. The non-wetland soils were examined along the wetland boundary and more distant upland areas during the delineation, including the proposed Facility location. They are dominated by Hartford sandy loam, Penwood loamy sand, and Ellington silt loam. Please note that due to the historic and current agricultural use of the Subject Property, many of the soil profiles exhibited alteration and artificial drainage of areas was also observed. Detailed descriptions of wetland and upland soil types are provided below.

Wetland Soils:

The **Raypol** series consists of very deep, poorly drained soils formed in loamy over sandy and gravelly glacial outwash. They are nearly level to gently sloping soils in shallow drainageways and low-lying positions on terraces and plains. The soils have a water table at or near the surface much of the year.

The **Scarboro** series consists of very deep, very poorly drained soils on outwash plains, deltas, and terraces. They are nearly level soils in depressions. The water table is at or near the surface for 6 to 12 months of the year, and many areas are ponded for short periods. This is a mineral soil, but it has a mucky surface horizon.

Upland Soils:

The **Ellington** series consists of very deep, moderately well drained soils formed in loamy over sandy and gravelly glacial outwash. They are nearly level to strongly sloping soils on glaciofluvial landforms, typically in slight depressions and broad drainageways. Slope ranges from 0 to 15 percent. Permeability is moderate or moderately rapid in the surface layer and subsoil, and rapid or very rapid in the substratum.

The **Hartford** series consists of very deep, somewhat excessively drained soils formed in sandy glacial outwash. They are nearly level to strongly sloping soils on plains and terraces. Slope ranges from 0 to 15 percent. Permeability is moderately rapid in the surface layer and subsoil, and rapid or very rapid in the substratum.

The **Penwood** series consists of excessively drained sandy soils formed in glaciofluvial (outwash) deposits. The soils are very deep to bedrock and located on nearly level outwash plains and terraces. Permeability is rapid to very rapid with the depth to seasonal water table greater than 6 feet.

¹ NRCS Web Soil Survey, <http://websoilsurvey.nrcs.usda.gov/app/>, accessed on April 2, 2014.

Wetlands Discussion:

Wetland 1 Classification Summary:

Wetland 1² (WF 1-01 to 1- 1-22 and WF 1-50 to 1- 61)	System Palustrine	Subsystem	Class Emergent	Subclass Nonpersistent	Water Regime Seasonally Flooded	Special Modifier Farmed
Watercourse Type	Perennial <input type="checkbox"/>	Intermittent <input checked="" type="checkbox"/>	Tidal <input type="checkbox"/>	Special Aquatic Habitat (None)	Vernal Pool <input type="checkbox"/>	Other <input type="checkbox"/>

Wetland 1 Description:

Wetland 1 is a complex of a hillside seep wetland system, intermittent stream system, and open water pond formed in glaciofluvial (outwash) parent material. Wetland 1 generally encompasses the northern and southern boundary of the proposed access route originating offsite to the north. This wetland system generally flows east to west, bisected by the existing paved road; a small 3-inch PVC pipe conveys flows from an incised intermittent watercourse channel on the east side of the road where it empties into the pond. This open water feature returns to a channelized intermittent stream system as it flows west and under Candlewood Road. Wetland 1 is subject to varying degrees of anthropogenic disturbance in association with the current horse farm development, as well as from historic agricultural activities.

Wetland 1 Dominant Vegetation:

Dominant Wetland Species Common Name (Latin Name)	Dominant Adjacent Upland Species Common Name (Latin Name)
Red Maple (<i>Acer rubrum</i>)	Maintained (unidentifiable) cool season grasses associated with maintained lawn/pasture
Tussock Sedge (<i>Carex stricta</i>)	
Highbush Blueberry (<i>Vaccinium corymbosum</i>)	
Purple Loosestrife* (<i>Lythrum salicaria</i>)	
Sensitive Fern (<i>Oncoclea sensibilis</i>)	
Silky Dogwood (<i>Cornus amomum</i>)	

* denotes Connecticut Invasive Plants Council invasive species

Summary:

Based on APT’s understanding of the proposed Message Center Management, Inc. development and a review of the Site Plan prepared by APT (Sheet No. SP-1, latest revision date 05/09/14), no direct impact to wetlands or watercourses is associated with the proposed development of the tower/compound or gravel access. The proposed Message Center Management Facility’s compound is located 50± feet northwest of Wetland 1 (northwest compound corner to wetland flag WF 1-14) and 50± feet west from the edge of the proposed gravel access to wetland flag WF 1-19. Due to the close proximity of portions of Wetland 1 to the existing paved road, the proposed underground utility route will generally be positioned to avoid direct wetland impacts but will be in close proximity to wetland flags WF 1-52 through 1-58. Possible alternate routes for the underground utility route through the Subject Property would result in greater impact to wetlands due to the larger wetland area located on the south side of the existing paved road. If wetlands impacts should occur during trenching activities for the underground utility route, they would be considered temporary and not expected to result in a likely adverse impact to wetlands due to

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. Jamestown, ND: Northern Prairie Wildlife Research Center Online. <http://www.npwrc.usgs.gov/resource/wetlands/classwet/index.htm - contents>.

the existing disturbed and developed nature of this wetland area (e.g., immediately adjacent to the paved road and located within a horse paddock area).

Minor temporary impacts may be associated with Message Center Management's construction activities due to the close proximity to wetlands and the proposed underground utility route. Provided sedimentation and erosion controls are designed, installed and maintained during construction activities in accordance with the *2002 Connecticut Guidelines For Soil Erosion and Sediment Control*, temporary impacts would be minimized. Long term secondary impacts to wetland resources possibly associated with the operation of this Facility are minimized by the fact the development is unmanned, it minimizes the creation of impervious surfaces with the use of a gravel access drive and gravel compound, it creates minimal traffic and the wetland system currently experiences a high level of human and agricultural activity associated with the horse farm. APT recommends that stormwater generated by the proposed development be properly handled and treated in accordance with the *2004 Connecticut Stormwater Quality Manual*, with an emphasis on utilizing Green Infrastructure/Low Impact Development techniques³, where appropriate and deemed necessary through engineering analysis. APT understands that details of the erosion control and stormwater management plans would be developed during the Council's Development and Management ("D&M") Plan, should the Facility be approved by the Council. Provided these recommendations are implemented, it is APT's opinion that the proposed Message Center Management, Inc. development would not result in a likely adverse impact to wetland resources.

If you have any questions regarding the above-referenced information, please feel free to contact me by telephone at (860) 663-1697 ext. 202 or via email at mgustafson@allpointstech.com.

Sincerely,

All-Points Technology Corporation, P.C.

Delineation Performed by:

Delineation Reviewed by:

Matthew Gustafson
Registered Soil Scientist

Dean Gustafson
Professional Soil Scientist

Enclosure

³ Connecticut Department of Energy & Environmental Protection. *Low Impact Development Appendix to the Connecticut Stormwater Quality Manual*. June 2011.

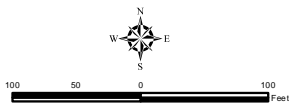
Wetland Delineation Map



Legend

- Proposed Tower Location
- Proposed Facility Layout
- Fence
- Approximate Subject Parcel Boundary
- Wetland Flag
- Delineated Wetland Boundary
- Wetland Area

Base Map Source: 2012 Aerial Photograph (CTECO)
Map Date: May 2014



Wetland Delineation Map

Proposed Wireless
Telecommunications Facility
Glastonbury
Candlewood Road
Glastonbury, Connecticut

