



WETLAND INSPECTION

February 21, 2017
Revised November 6, 2017

APT Project No.: CT1417950

Prepared For: Verizon Wireless
99 East River Drive
East Hartford, CT 06108
Attn: James Smith

Verizon Wireless Site Name: Lebanon Center CT

Site Address: 917 Exeter Road
Lebanon, Connecticut

Date(s) of Investigation: 2/6/2017

Field Conditions: **Weather:** sunny, mid 30's
Soil Moisture: dry to moist

Wetland/Watercourse Delineation Methodology*:

- Connecticut Inland Wetlands and Watercourses
- Connecticut Tidal Wetlands
- Massachusetts Wetlands
- U.S. Army Corps of Engineers

Municipal Upland Review Area/Buffer Zone:

Wetlands: 100 feet
Watercourses: 100 feet

The wetlands inspection was performed by[†]:

Matthew Gustafson, Registered Soil Scientist

Enclosures: Wetland Delineation Field Forms & Wetland Inspection Map

This report is provided as a brief summary of findings from APT's wetland investigation of the referenced Study Area that consists of proposed development activities and areas generally within 200 feet.[‡] If applicable, APT is available to provide a more comprehensive wetland impact analysis upon receipt of site plans depicting the proposed development activities and surveyed location of identified wetland and watercourse resources.

* Wetlands and watercourses were delineated in accordance with applicable local, state and federal statutes, regulations and guidance.

† All established wetlands boundary lines are subject to change until officially adopted by local, state, or federal regulatory agencies.

‡ APT has relied upon the accuracy of information provided by Verizon Wireless and its contractors regarding proposed lease area and access road/utility easement locations for identifying wetlands and watercourses within the study area.

Attachments

- Wetland Delineation Field Forms
- Wetland Inspection Map

Wetland Delineation Field Form

Wetland I.D.:	Wetland 1	
Flag #'s:	WF 1-01/1-11 (Closed Loop)	
Flag Location Method:	Site Sketch <input checked="" type="checkbox"/>	GPS (sub-meter) located <input checked="" type="checkbox"/>

WETLAND HYDROLOGY:

NONTIDAL

Intermittently Flooded <input type="checkbox"/>	Artificially Flooded <input type="checkbox"/>	Permanently Flooded <input type="checkbox"/>
Semipermanently Flooded <input type="checkbox"/>	Seasonally Flooded <input type="checkbox"/>	Temporarily Flooded <input type="checkbox"/>
Permanently Saturated <input type="checkbox"/>	Seasonally Saturated – seepage <input checked="" type="checkbox"/>	Seasonally Saturated - perched <input type="checkbox"/>
Comments: Small, isolated wetland pocket with surface saturation consisting of less than 2 inches.		

TIDAL

Subtidal <input type="checkbox"/>	Regularly Flooded <input type="checkbox"/>	Irregularly Flooded <input type="checkbox"/>
Irregularly Flooded <input type="checkbox"/>		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine <input type="checkbox"/>	Riverine <input type="checkbox"/>	Palustrine <input checked="" type="checkbox"/>
Lacustrine <input type="checkbox"/>	Marine <input type="checkbox"/>	
Comments: None		

CLASS:

Emergent <input checked="" type="checkbox"/>	Scrub-shrub <input type="checkbox"/>	Forested <input checked="" type="checkbox"/>
Open Water <input type="checkbox"/>	Disturbed <input checked="" type="checkbox"/>	Wet Meadow <input type="checkbox"/>
Comments: None		

WATERCOURSE TYPE:

Perennial <input type="checkbox"/>	Intermittent <input type="checkbox"/>	Tidal <input type="checkbox"/>
Watercourse Name: None		
Comments: None None		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Potential <input type="checkbox"/>	Other <input type="checkbox"/>
Vernal Pool Habitat Type: None	
Comments: inundation too shallow to support vernal pool habitat for breeding amphibians	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
If no, describe field identified soils		

DOMINANT PLANTS:

Soft Rush (<i>Juncus effuses</i>)	Sphagnum moss (<i>Sphagnum spp.</i>)
Multiflora Rose* (<i>Rosa multiflora</i>)	Sensitive Fern (<i>Onoclea sensibilis</i>)
Japanese Barberry* (<i>Berberis thunbergii</i>)	Spicebush (<i>Lindera benzoin</i>)
Red Maple (<i>Acer rubrum</i>)	

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

Verizon Wireless is proposing to construct a wireless telecommunications facility (“Facility”) at 917 Exeter Road in Lebanon, CT. The property hosts the Lyman Memorial High School. The Facility is proposed to be located within edge mature upland forest habitat. The proposed Facility would consist of a monopole and associated ground equipment located within a gravel compound area surrounded by a chain-link fence. Access to the proposed Facility would extend off an existing paved access serving the high school transitioning and then an existing dirt road used by the agricultural outdoor classroom. A small portion of the access would go through existing mature edge upland forest. The proposed access would occur in close proximity to Wetland 1 (±26 feet south of proposed access road) and ±109 feet would separate the wetland from the north side of the proposed compound.

Wetland 1 consists of a small isolated wetland pocket at the edge of an existing clearing. The cleared area is associated with a high school agriculture outdoor classroom. As such, this wetland has been subjected to varying degrees of historical disturbance resulting in fill and altered soil profile; 4 to 6 inches of fill was observed in a majority of the wetland area. Small pockets of surface saturation were present within the wetland ranging from 1 to 2 inches. Hydrology appears to result from hillside seepage that exfiltrates along the north and west sides of the wetland.

Provided erosion and sedimentation controls are installed and maintained during construction in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control, no likely adverse impact to wetlands is anticipated with the proposed Verizon Wireless development provided wetland protection measures are implement during construction. Details of a wetland protection plan are provided in APT’s November 6, 2017 Vernal Pool Analysis report, provided under separate cover.

Wetland Delineation Field Form

Wetland I.D.:	Wetland 2	
Flag #'s:	WF 2-01 to 2-08	
Flag Location Method:	Site Sketch <input checked="" type="checkbox"/>	GPS (sub-meter) located <input checked="" type="checkbox"/>

WETLAND HYDROLOGY:

NONTIDAL

Intermittently Flooded <input type="checkbox"/>	Artificially Flooded <input type="checkbox"/>	Permanently Flooded <input type="checkbox"/>
Semipermanently Flooded <input type="checkbox"/>	Seasonally Flooded <input checked="" type="checkbox"/>	Temporarily Flooded <input type="checkbox"/>
Permanently Saturated <input type="checkbox"/>	Seasonally Saturated – seepage <input checked="" type="checkbox"/>	Seasonally Saturated - perched <input type="checkbox"/>
Comments: Forest wetland seep drains to a seasonally saturated depression. Drains out as an intermittent watercourse to east.		

TIDAL

Subtidal <input type="checkbox"/>	Regularly Flooded <input type="checkbox"/>	Irregularly Flooded <input type="checkbox"/>
Irregularly Flooded <input type="checkbox"/>		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine <input type="checkbox"/>	Riverine <input type="checkbox"/>	Palustrine <input checked="" type="checkbox"/>
Lacustrine <input type="checkbox"/>	Marine <input type="checkbox"/>	
Comments: None		

CLASS:

Emergent <input type="checkbox"/>	Scrub-shrub <input type="checkbox"/>	Forested <input checked="" type="checkbox"/>
Open Water <input type="checkbox"/>	Disturbed <input type="checkbox"/>	Wet Meadow <input type="checkbox"/>
Comments: None		

WATERCOURSE TYPE:

Perennial <input type="checkbox"/>	Intermittent <input checked="" type="checkbox"/>	Tidal <input type="checkbox"/>
Watercourse Name: Unnamed		
Comments: Narrow intermittent watercourse outletting from an inundated depression flowing over an existing dirt trail.		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Potential <input type="checkbox"/>	Other <input type="checkbox"/>
Vernal Pool Habitat Type: 'Classic'	
Comments: Shallow depression with approximately 4 inches of inundation at the time of inspection. Based on hydrological indicators, it appears this depression fills with 6-8 inches of water during peak hydroperiods.	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
If no, describe field identified soils		

DOMINANT PLANTS:

Spicebush (<i>Lindera benzoin</i>)	Red Maple (<i>Acer rubrum</i>)
Japanese Barberry* (<i>Berberis thunbergii</i>)	Multiflora Rose* (<i>Rosa multiflora</i>)
Skunk Cabbage (<i>Symplocarpus foetidus</i>)	Sphagnum moss (<i>Sphagnum</i> spp.)

* denotes Connecticut Invasive Species Council invasive plant species

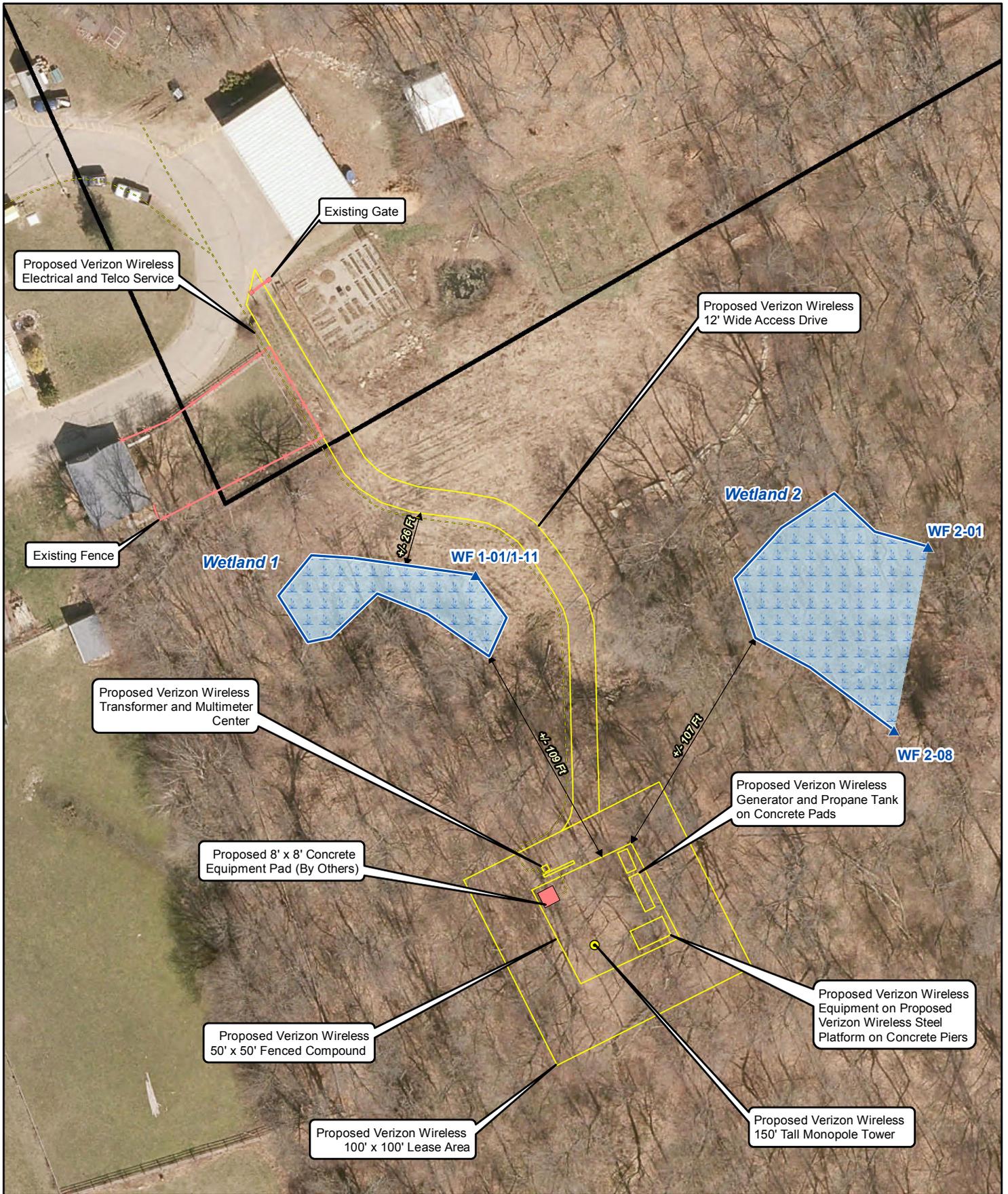
GENERAL COMMENTS:

Verizon Wireless is proposing to construct a wireless telecommunications facility (“Facility”) at 917 Exeter Road in Lebanon, CT. The property hosts the Lyman Memorial High School. The Facility is proposed to be located within edge mature upland forest habitat. The proposed Facility would consist of a monopole and associated ground equipment located within a gravel compound area surrounded by with exterior chain-link fence. Access would be provided by an existing paved access serving the high school then by an existing dirt road maintained by the agricultural outdoor classroom. A small portion of the access would go through existing mature edge upland forest. The proposed access would occur ±70 feet west of Wetland 2 at its closest point (from wetland flag WF 2-05) and the northeast corner of the proposed compound would be ±107 feet southwest of WF 2-06.

Wetland 2 consists of a complex of a hillside seep, inundated depression/potential vernal pool, and intermittent watercourse system. Hydrology drains from the west and north as a hillside seep system draining east into an inundated depression with the characteristics to support vernal pool breeding habitat. This potential vernal pool area drains east as a narrow intermittent watercourse that flows over an existing dirt trail. Wetland 2 is entirely forested with a dense understory shrub layer mostly consisting of Japanese barberry, an invasive shrub species.

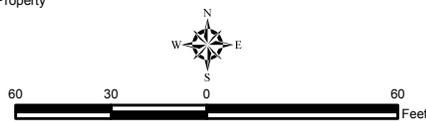
Provided erosion and sedimentation controls are installed and maintained during construction in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control, no likely adverse impact to wetlands is anticipated with the proposed Verizon Wireless development provided wetland protection measures are implement during construction. Details of a wetland protection plan are provided in APT's November 6, 2017 Vernal Pool Analysis report, provided under separate cover.

The proposed Verizon Wireless project is located within the critical terrestrial habitat (100’-750’ from the vernal pool edge) of vernal pool habitat located within Wetland 2. Provided a vernal pool protection plan is implemented during construction, details of which are provided in APT's November 6, 2017 Vernal Pool Analysis report provided under separate cover, no likely adverse impact to herpetofauna would occur.



- Legend**
- Proposed Monopole Tower
 - Proposed Facility Layout
 - Proposed Verizon Wireless Electrical and Telco Service
 - Existing Fence (By Others)
 - Proposed Equipment (By Others)
 - Existing Gate (By Others)
 - Wetland Flag
 - Approximate Wetland Area
 - Delineated Wetland Boundary
 - Approximate Parcel Boundary (CTDEEP GIS)
 - Subject Property

Map Notes:
 Base Map Source: 2016 Aerial Photograph (CTECO)
 Map Scale: 1 inch = 60 feet
 Map Date: November 2017



Wetland Inspection Map

Proposed Wireless
 Telecommunications Facility
 Lebanon Center
 917 Exeter Road
 Lebanon, Connecticut





VERNAL POOL ANALYSIS

November 6, 2017

**Verizon Wireless
99 East River
East Hartford, CT 06108**

APT Project No.: CT1417950

**Re: Proposed Lebanon Center CT
917 Exeter Road
Lebanon, Connecticut**

All-Points Technology Corporation, P.C. ("APT") understands that a wireless telecommunications facility ("Facility") is proposed by Verizon Wireless on two parcels of land located south of Exeter Road in Lebanon, New London County, Connecticut. The primary components of the proposed Facility (including a monopole tower and fence-enclosed equipment compound) would be located on the southern portion of a parcel identified as 917 Exeter Road. The 917 Exeter Road parcel is currently developed with the buildings, infrastructure and athletic facilities of Lyman Memorial High School. The proposed access driveway and underground utility connections would extend through a portion of the abutting property (891 Exeter Road), which is currently developed with the Lebanon Middle School complex. Both parcels (917 Exeter Road and 891 Exeter Road) are owned by the Town of Lebanon and are collectively referred to herein as the be the "Subject Property".

At your request, APT has completed an assessment of potential impacts to vernal pool habitat located on the Subject Property which may be affected by proposed construction of the Project. This evaluation is based on field inspections performed on February 6, 2017 and April 20, 2017 by APT along with a review of site plans prepared by APT (latest revision date 09/26/17). The findings of this assessment are presented below.

Introduction

APT wetland scientists conducted an initial inspection of the Subject Property on February 6, 2017 to confirm the presence and extent of wetlands and watercourses within approximately 200 feet of the proposed Project activities ("Study Area"). At that time, a small isolated depression was identified within one of two nearby delineated wetlands that demonstrated a potential to support vernal pool breeding habitat. A second site visit was performed on April 20, 2017 to confirm if any obligate vernal pool species were utilizing this depressional pool for breeding. A summary of our findings are provided below.

The Facility is proposed to be located within edge mature upland forest habitat. The proposed Facility would consist of a monopole and associated ground equipment located within a gravel compound area surrounded by an exterior chain-link fence. Access would be provided by an existing paved access serving the high school then by an existing dirt road maintained by the agricultural outdoor classroom with a small portion of the access passing through existing mature edge upland forest.

ALL-POINTS TECHNOLOGY CORPORATION, P.C.

3 SADDLEBROOK DRIVE · KILLINGWORTH, CT 06419 · PHONE 860-663-1697 · FAX 860-663-0935

One vernal pool habitat feature consisting of a small isolated wetland depression/pocket was identified within Wetland 2. A survey of this pool during the April 20, 2017 inspection documented the presence of both wood frog egg masses (4) and spotted salamander egg masses (4). Inundation of the pool was recorded at approximately 8 inches at the deepest location. Generally, this vernal pool did not contain high attachment site locations though the duff/leaf litter was relatively deep. The vernal pool drains north via a narrow intermittent watercourse feature away from the proposed Facility. The surrounding land use generally consists of maintained open field associated with the school, the infrastructure of the school, upland forest and relatively small forested wetland areas.

Physical Impact to Vernal Pool and Surrounding Terrestrial Habitat

This section details a recognized scientific method for analyzing the potential impact a project may have on a particular vernal pool and its surrounding upland habitat.

Construction and operation of the Facility would not result in direct physical impact to the identified vernal pool. It is widely documented that vernal pool dependent amphibians are not only solely dependent upon the actual vernal pool habitat for breeding and egg and juvenile development but require surrounding upland habitat for most of their adult lives. Recent studies recommend protection of adjacent habitat up to 750 feet from the vernal pool edge for obligate pool-breeding amphibians.¹

In order to evaluate potential impacts to this vernal pool and its surrounding upland habitat, the resource was assessed using methodology developed by Calhoun and Klemens (2002). This methodology assesses vernal pool ecological significance based on two parameters: 1) biological value of the vernal pool, and 2) conditions of the critical terrestrial habitat. The biological rating is based on the presence of federal or state-listed species and abundance and diversity of vernal pool indicator species. (Note: based on the observations of two obligate vernal pool species breeding in this vernal pool, the highest biological value is assigned.) The terrestrial habitat is assessed based on the integrity of the vernal pool envelope (within 100 feet of the pool's edge; "VPE") and the critical terrestrial habitat (within 100-750 feet of the pool's edge; "CTH"). A priority rating of Tier I was assigned to the vernal pool, with Tier I considered to have relatively high breeding activity and relatively intact terrestrial habitat² (Tier II and III pools represent lower amphibian productivity and fragmented terrestrial habitat). Pools with 25% or less developed areas in the critical terrestrial habitat are identified as having high priority for maintaining less than 25% development within this terrestrial habitat, including site clearing, grading and construction¹.

The vernal pool evaluated in this assessment was rated based on these criteria for both the existing condition and the proposed condition (e.g., Verizon's proposed development) to determine if the proposed development would result in a reduction in the tier rating system or reduce the terrestrial habitat integrity below the critical 75% non-development criterion. As previously discussed, the vernal pool currently has the highest conservation priority rating of Tier I. The results of this analysis show that the proposed development will not result in further degradation of the existing tier rating or terrestrial habitat integrity of the vernal pool due to the small amount of disturbance associated with the Facility. The vernal pool envelope will not be impacted by the proposed development; the proposed access road would be located ±110 feet west of the vernal pool while the proposed tower compound would be located ±125 feet to the southwest. The total area of the CTH (±42.4 acres) associated with the vernal pool primarily includes developed/maintained areas associated with Lyman Memorial High School (±14.7 acres) and undeveloped forested land (27.7 acres). The vernal pool's CTH has ±35% development under existing conditions resulting in the 75% non-

1 Calhoun, A.J.K. and M.W. Klemens. 2002. Best Development Practices (BDPs): Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States. WCS/MCA Technical Paper No. 5.

2 Vernal Pool Assessment Sheet (source: Calhoun and Klemens 2002)

development criterion tipping point already having been exceeded (65% non-development). As a result, this pool would not qualify for this conservation priority. Please refer to the enclosed Vernal Pool Analysis Map.

The proposed Facility and access are located within the CTH and would result in ± 0.2 acres of additional development, an increase of only $\pm 0.5\%$ of the total CTH associated with the vernal pool. Therefore, the proposed Verizon development represents a de minimis increase in development of the vernal pool's critical terrestrial habitat. Considering the existing condition of the CTH already exceeds the 75% non-development criterion³, the addition of $\pm 0.5\%$ development would not result in a likely adverse impact to existing amphibian productivity nor will it result in long-term adverse impact to the terrestrial habitat. This assessment is further supported considering the relatively small area of development proposed and a minimum 100-foot non-disturbance vegetated buffer would remain between the vernal pool and the Facility.

The potential exists for possible short-term impact to herpetofauna associated with the nearby vernal pool habitat due to possible encounters with migrating and basking individuals that may intercept the proposed development footprint during construction. Short-term impacts associated with the proposed development within the terrestrial habitat proximate to the vernal pool would be minimized by the proper installation and maintenance of erosion and sedimentation controls in accordance with *2002 Connecticut Guidelines For Soil Erosion and Sediment Control*. Best Management Practices ("BMPs") are proposed during construction in a subsequent section of this document to avoid/minimize the potential for short-term impact to herpetofauna.

Hydraulic Alterations

Land-use changes (i.e., clearing, increases in impervious surface) can increase surface runoff in the watershed of a vernal pool. Direct inputs of stormwater flows into a pool may produce sudden water level increases in a short period of time and may lengthen the duration of flooding (hydroperiod). Diversion of stormwater flows past a pool may have the opposite effect of decreasing water levels and shortening the pool's hydroperiod. In addition, stormwater features that create temporary pools of water can result in a biological "sink" as breeding amphibians deposit eggs into a water body without the necessary hydraulic period to allow for successful development of the eggs into juveniles.

The proposed development will not alter existing surface or subsurface flow conditions or directions. Site clearing and grading activities will not de-water the nearby vernal pool or alter surface water drainage patterns associated with the pool. Impervious surfaces associated with the proposed Project have been minimized with the use of a gravel surface within the Project area to support infiltration and local groundwater recharge. Therefore, the proposed development will not alter the hydrology of the nearby vernal pool. In addition, no stormwater management features (temporary or permanent) are proposed that would result in creation of a temporary "decoy" pool and "sink" features, which could potentially affect breeding amphibians intercepted on their migration to the nearby vernal pool.

Vernal Pool Recommended Best Management Practices

As a result of the proposed development's location in the vernal pool's critical terrestrial habitat, BMPs are recommended to both protect the nearby wetland resources from temporary impacts and avoid unintentional impact or mortality to vernal pool herpetofauna (i.e., wood frog, salamanders, turtles, etc.) during construction activities. The vernal pool BMPs would be implemented during peak amphibian movement periods (early spring breeding [March 1st to May 15th] and late summer dispersal [July 15th to September 15th]) while the wetland BMPs would be implemented regardless of time of year. Details of the recommended wetland and vernal pool protection plan are enclosed.

³This threshold is generally used for prioritizing vernal pool conservation efforts: Calhoun, A.J.K. and M.W. Klemens. 2002. Best Development Practices (BDPs): Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States. WCS/MCA Technical Paper No. 5. Pg. 10.

Provided the wetland and vernal pool protection plan is properly implemented during construction activities, it is APT's opinion the proposed development will not result in a likely adverse impact to nearby vernal pool or 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. 201 or via email at dgustafson@allpointstech.com.

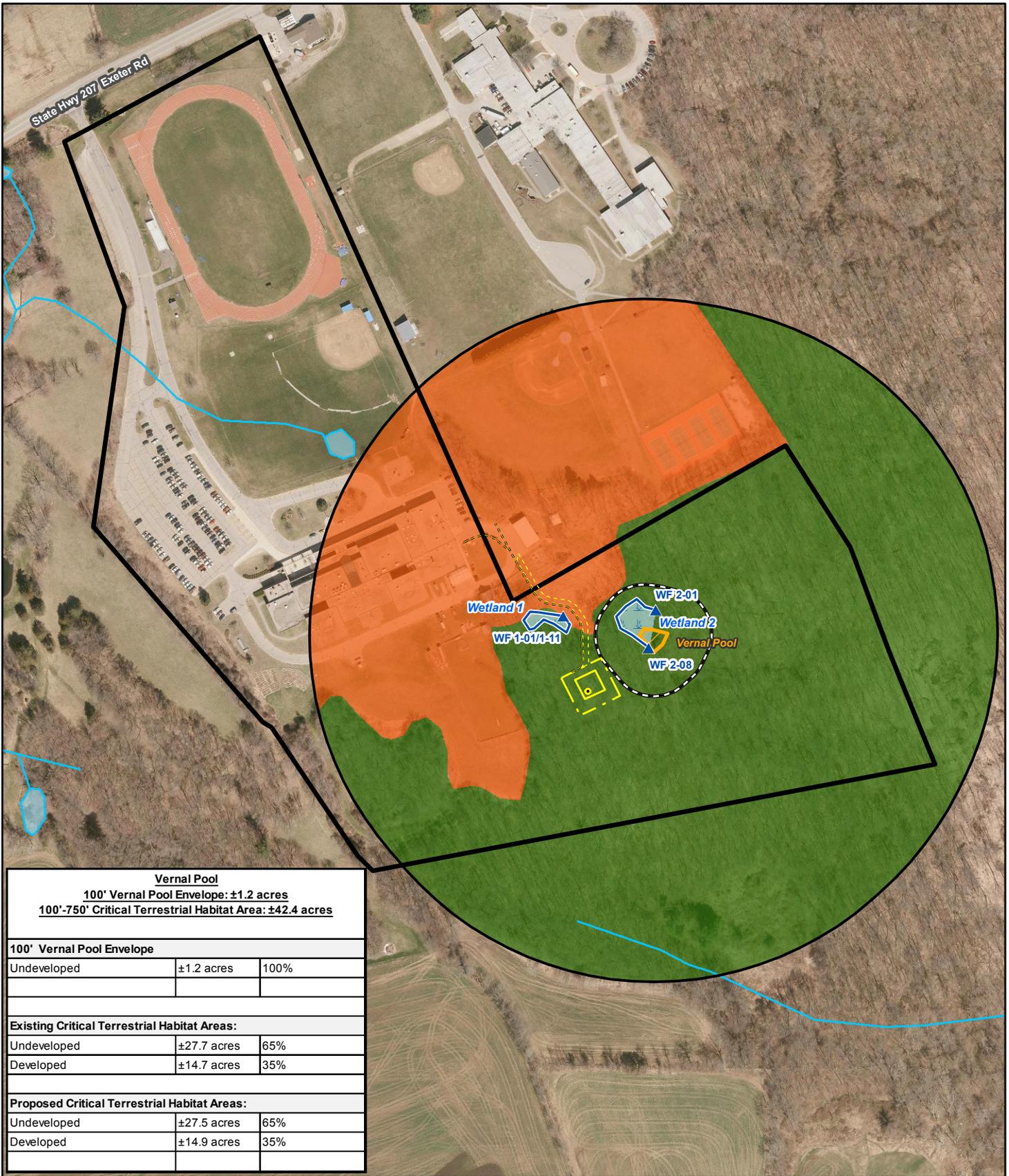
Sincerely,

All-Points Technology Corporation, P.C.

Dean Gustafson
Senior Wetland Scientist

Enclosures

Vernal Pool Analysis Map



Vernal Pool		
100' Vernal Pool Envelope: ±1.2 acres		
100'-750' Critical Terrestrial Habitat Area: ±42.4 acres		
100' Vernal Pool Envelope		
Undeveloped	±1.2 acres	100%
Existing Critical Terrestrial Habitat Areas:		
Undeveloped	±27.7 acres	65%
Developed	±14.7 acres	35%
Proposed Critical Terrestrial Habitat Areas:		
Undeveloped	±27.5 acres	65%
Developed	±14.9 acres	35%

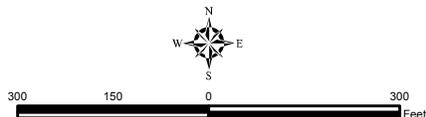
Legend

- Proposed Verizon Wireless 150' Tall Monopole Tower
- Proposed Verizon Wireless 50' x 50' Fenced Compound
- Proposed Verizon Wireless 100' x 100' Lease Area
- Proposed Verizon Wireless 12' Access Drive
- Proposed Verizon Wireless Electric and Telco Service
- Vernal Pool
- 100' Vernal Pool Envelope
- 100'-750' Critical Terrestrial Habitat Area
- Wetland Flag
- Delineated Wetland Boundary
- Approximate Wetland Area
- CTDEEP Waterbody
- CTDEEP Watercourse
- Developed
- Undeveloped
- Subject Property
- Approximate Parcel Boundary (CTDEEP)

Vernal Pool Analysis Map

Proposed Wireless Telecommunications Facility
 Lebanon Center
 917 Exeter Road
 Lebanon, Connecticut

Map Notes:
 Base Map Source: 2016 Aerial Photograph (CTECO)
 Map Scale: 1 inch equals 300 feet
 Map Date: May 2017



Wetland and Vernal Pool Protection Plan

WETLAND AND VERNAL POOL PROTECTION PLAN

As a result of the Verizon Wireless project's location in the vicinity of wetland resources and vernal pool habitat, the following Best Management Practices ("BMPs") shall be implemented by the Contractor to avoid unintentional impacts to proximate wetland resources or mortality to vernal pool herpetofauna (i.e., wood frog, salamanders, turtles, etc.) during construction activities. The vernal pool specific BMPs shall be implemented should construction activities occur during peak amphibian movement periods (early spring breeding [March 1st to May 15th] and late summer dispersal [July 15th to September 15th]). BMP's associated with the protection of wetlands will be implemented regardless of the time of year.

It is of the utmost importance that the Contractor complies with the requirement for the installation of protective measures and the education of its employees and subcontractors performing work on the project site. All-Points Technology Corporation, P.C. ("APT") will serve as the Environmental Monitor for this project to ensure that these protection measures are implemented properly and will provide an education session on the project's proximity to sensitive wetland resources and associated herpetofauna prior to the start of construction activities. The Contractor shall contact Dean Gustafson, Senior Environmental Scientist at APT, at least 5 business days prior to the pre-construction meeting. Mr. Gustafson can be reached by phone at 663-1697 ext. 201 or via email at dgustafson@allpointstech.com.

The proposed wetland and vernal pool protection program consists of several components including: installation of erosion controls; periodic inspection and maintenance of isolation structures; herpetofauna sweeps; education of all contractors and sub-contractors prior to initiation of work on the site; protective measures; and, reporting.

1. Erosion and Sedimentation Controls

- a. Plastic netting used in a variety of erosion control products (i.e., erosion control blankets, fiber rolls [wattles], reinforced silt fence) has been found to entangle wildlife, including reptiles, amphibians, birds and small mammals. No permanent erosion control products or reinforced silt fence will be used on the project. Temporary erosion control products that will be exposed at the ground surface and represent a potential for wildlife entanglement will use either erosion control blankets and fiber rolls composed of processed fibers mechanically bound together to form a continuous matrix (netless) or netting composed of planar woven natural biodegradable fiber to avoid/minimize wildlife entanglement.
- b. Installation of erosion and sedimentation controls, required for erosion control compliance and creation of a barrier too possible migrating/dispersing herpetofauna (only applicable during the seasonal restriction period and will be installed at the discretion of the Environmental Monitor), shall be performed by the Contractor if any soil disturbance occurs or heavy machinery is anticipated to be used on slopes. The Environmental Monitor will inspect the work zone area prior to and following erosion control barrier installation. In addition, work zones in proximity to vernal pool resources will be inspected prior to and following erosion control barrier installation to ensure the area is free of herpetofauna and satisfactorily installed. The intent of the barrier is to segregate the majority of the work zone from migrating/dispersing herpetofauna. Oftentimes complete isolation of a work zone is not feasible due to accessibility needs and locations of staging/material storage areas, etc. In those circumstances, the barriers will be positioned to deflect migrating/dispersal routes away from the work zone to minimize potential encounters with herpetofauna at the discretion of the Environmental Monitor.
- c. No equipment, vehicles or construction materials shall be stored within 100 feet of wetland resources.

- d. All silt fencing or other potential barriers to safe herpetofauna migration shall be removed within 30 days of completion of work and permanent stabilization of site soils so that reptile and amphibian movement between uplands and wetlands is not restricted.

2. Contractor Education:

- a. Prior to work on site and initial deployment/mobilization of equipment and materials, the Contractor shall attend an educational session at the pre-construction meeting with APT. This orientation and educational session will consist of information such as, but not limited to: identification of wetland resources proximate to work areas, representative photographs of typical herpetofauna that may be encountered, Connecticut and Federal listing status of species that could be encountered, typical species behavior, and proper procedures if species are encountered. The meeting will further emphasize the non-aggressive nature of these species, the absence of need to destroy such animals and the need to follow Protective Measures as described in Section 4 below. The Contractor will designate one of its workers as the "Project Monitor", who will receive more intense training on the identification and protection of herpetofauna.
- b. The Contractor will designate a member of its crew as the Project Monitor to be responsible for the periodic "sweeps" for herpetofauna within the construction zone each morning and for any ground disturbance work. This individual will receive more intense training from APT on the identification and protection of herpetofauna in order to perform sweeps. Any herpetofauna discovered would be translocated outside the work zone in the general direction the animal was oriented.
- c. The Contractor's Project Monitor will be provided with cell phone and email contacts for APT personnel to immediately report any encounters with herpetofauna. Educational poster materials will be provided by APT and displayed on the job site to maintain worker awareness as the project progresses.
- d. APT will also post Caution Signs throughout the project site for the duration of the construction project providing notice of the environmentally sensitive nature of the work area, the potential for encountering various amphibians and reptiles and precautions to be taken to avoid injury to or mortality of these animals.

3. Petroleum Materials Storage and Spill Prevention

- a. Certain precautions are necessary to store petroleum materials, refuel and contain and properly clean up any inadvertent fuel or petroleum (i.e., oil, hydraulic fluid, etc.) spill due to the project's location in proximity to wetland resources.
- b. A spill containment kit consisting of a sufficient supply of absorbent pads and absorbent material will be maintained by the Contractor at the construction site throughout the duration of the project. In addition, a waste drum will be kept on site to contain any used absorbent pads/material for proper and timely disposal off site in accordance with applicable local, state and federal laws.
- c. The following petroleum and hazardous materials storage and refueling restrictions and spill response procedures will be adhered to by the Contractor.
 - i. Petroleum and Hazardous Materials Storage and Refueling
 1. Refueling of vehicles or machinery shall occur a minimum of 100 feet from wetlands or watercourses and shall take place on an impervious pad with secondary containment designed to contain fuels.

2. Any fuel or hazardous materials that must be kept on site shall be stored on an impervious surface utilizing secondary containment a minimum of 100 feet from wetlands or watercourses.

ii. Initial Spill Response Procedures

1. Stop operations and shut off equipment.
2. Remove any sources of spark or flame.
3. Contain the source of the spill.
4. Determine the approximate volume of the spill.
5. Identify the location of natural flow paths to prevent the release of the spill to sensitive nearby waterways or wetlands.
6. Ensure that fellow workers are notified of the spill.

iii. Spill Clean Up & Containment

1. Obtain spill response materials from the on-site spill response kit. Place absorbent materials directly on the release area.
2. Limit the spread of the spill by placing absorbent materials around the perimeter of the spill.
3. Isolate and eliminate the spill source.
4. Contact the appropriate local, state and/or federal agencies, as necessary.
5. Contact a disposal company to properly dispose of contaminated materials.

iv. Reporting

1. Complete an incident report.
2. Submit a completed incident report to the Connecticut Siting Council.

4. Protective Measures

- a. A thorough cover search of the construction area will be performed by APT's Environmental Monitor for herpetofauna prior to and following installation of the silt fencing barrier to remove any species from the work zone prior to the initiation of construction activities. Any herpetofauna discovered would be translocated outside the work zone in the general direction the animal was oriented. Periodic inspections will be performed by APT's Environmental Monitor throughout the duration of the construction.
- b. Any stormwater management features, ruts or artificial depressions that could hold water created intentionally or unintentionally by site clearing/construction activities will be properly filled in and permanently stabilized with vegetation to avoid the creation of vernal pool "decoy pools" that could intercept amphibians moving toward the vernal pools. Stormwater management features such as level spreaders will be carefully reviewed in the field to ensure that standing water does not endure for more than a 24-hour period to avoid creation of decoy pools and may be subject to field design changes. Any such proposed design changes will be reviewed by the design engineer to ensure stormwater management functions are maintained.
- c. Erosion control measures will be removed no later than 30 days following final site stabilization so as not to impede migration of herpetofauna or other wildlife.

5. Herbicide and Pesticide Restrictions

- a. Contractors will avoid the use of herbicides and pesticides at the facility.

6. Reporting

- a. Daily Compliance Monitoring Reports (brief narrative and applicable photos) documenting each APT inspection will be submitted to Verizon Wireless for compliance verification.
- b. Following completion of the construction project, APT will provide a Compliance Monitoring Summary Report to Verizon Wireless documenting implementation of the wetland and vernal pool protection program and monitoring observations. Verizon Wireless will provide a copy of the Compliance Monitoring Summary Report to the Connecticut Siting Council for compliance verification.
- c. Any observations of rare species will be reported to CTDEEP by APT, with photo-documentation (if possible) and with specific information on the location and disposition of the animal.