ENVIRONMENTAL MONITORING
DAILY SITE OBSERVATION FORM

Report No. 1

Project: Verizon Wireless Canterbury South CT Facility
Address: 46 Cemetery Road, Canterbury, Connecticut

APT Project No: CT1418090

Date of Inspection: 2/5/2020	Weather: cloudy, mid, 40's
Time of Inspection: 9:00 AM	Latest Precipitation Event > ¼" (NOAA):0.81" on 1/26/2020
Compliance Monitor:	Matthew Gustafson, Wetland Scientist
Regulatory Compliance Permitting Agency & Permit ID:	
ACOE NED ☒: NAE-2018-02520, dated November 13, 2018 CT Siting Council ☒: Docket No.477 CTDEEP IWRD ☐: N/A CTDEEP NDDB ☐: N/A	
Resource Protection Program:	
Rare Species ☐ Species Name: N/A Wetland Protection ☒ Wetland Restoration ☒	
Workers Environmental Awareness Program Training Completed: Yes ☒ No ☐	
Date of Training: 2/5/2020 Signage Installed Date: 2/5/2020	
Compliance Species Observed During Inspection: Yes ☐ No ☒	
Species Name: N/A # Species: N/A	
Progress of Construction:	
Pre-Construction ☒ Initial Exclusion Fencing Inspection ☒ Clearing & Grubbing ☐ Intermediate ☒ Final Inspection ☐	

ALL-POINTS TECHNOLOGY CORPORATION, P.C.
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DESCRIPTION OF OBSERVED ACTIVITY

Compliance Level:

Communication ☒
Acceptable ☐
Problem Area ☒

- ☐ Minor exclusion fencing repair required
- ☐ Additional exclusion fencing required
- ☐ Additional sedimentation & erosion control measure required
- ☐ Sediment release into upland habitat without risk of resource impact
- ☒ Soil stabilization required

Non-Compliance ☒

- ☐ Sediment release into upland habitat with risk of resource impact
- ☐ Sediment release into wetland habitat
- ☐ Sediment release into watercourse
- ☒ Work activities executed non-compliant with approved means/methods provided in wetland protection and restoration plan

Issues Requiring Corrective Action	Corrective Action Implemented
Refer to Notes dated 2/4/20 for details. Immediate corrective actions include soil stabilization with straw mulch, backfilling of open trenches within wetlands. APT is currently assessing wetland impacts to determine if further restoration or corrective actions are warranted.	

Project Modification Requested:

Extra work space requested ☐
Change to work area ☐
Change to stormwater feature ☐

Description of Modification: N/A

Notes:

2/5/20 - Due to an oversight by the parties involved, the procedures outlined in the Wetland Protection and Restoration Program for the utility crossing of these wetlands were not adhered to as noted in Sheet C-5 of the Connecticut Siting Council's approved D&M Plan. At the contractor meeting which APT attended on the morning of February 5th (APT was notified that construction activities in wetlands had already been initiated/completed on February 4th), it was observed that the utility crossings of Wetlands 4 and 5 had already been completed including access/tracking, trenching, installation of conduits, backfill, and initial surface restoration activities. The utility crossing of Wetland 6 was mid-progress at the time of APT's inspection with the trench open and conduits exposed with soils stockpiled pending backfill and surface restoration. Based on information provided by the contractor, general procedures followed for trenching activities (non-conformance with permit-approved methods) through wetlands included tracking into and across

wetland areas directly adjacent to the conduit trench without the use of protective construction mats, stockpiling of materials directly on the wetland soil surface adjacent to the trench (instead of on construction mats; trenching generally occurred along the northern edge of the three wetland resources and spoil piles were located in wetlands on the southern side of the open trench), covering of the conduits with a sandy fill material several inches surrounding the annulus of the conduits, and backfilling with native soil material. With the Wetland 6 utility trenching work in progress, APT noted that although no matting was used for equipment through Wetland 6 only minor rutting had occurred. The contractor also revealed that trench plugs were not installed in the conduit trenches through Wetlands 4 and 5. APT recommended that the contractor install the trench plugs in Wetland 6 since that trench was still open; that work was completed on February 7th. Trench plugs were originally specified to avoid/minimize potential hydrology impacts to the wetlands since the conduits are enveloped with sand providing a potential preferential pathway for shallow groundwater flow. Without the trench plugs there is the potential that the wetland hydrology could be adversely impacted due to the trench drying up the wetlands through diversion of shallow groundwater. Due to various site factors and the morphology and landscape position of these wetlands, it is APT's opinion that there is only a slight chance that the lack of trench plugs will adversely impact wetland hydrology, so we did not recommended excavation of the installed utility conduits through Wetlands 4 and 5 in order to install those trench plugs.

Silt fence perimeter controls were installed per the approved construction drawings. Post backfilling, disturbed wetland surface areas were generally restored to the previous surface elevations.

APT's inspection of the work areas in the wetland crossing, which included digging by hand soil test pits to determine what soil material comprised of the restored areas, revealed the following:

Generally, wetland soil removed through trenching activities was replaced within the same wetland areas. However, due to mixing and improper sorting/stockpiling procedures that would have segregated topsoil from subsoil material, any wetland topsoil was mixed with and lost within the wetland subsoil material during the restoration process. In addition, due to improper spoil pile stockpiling procedures and unprotected tracking/access across wetland areas, temporary wetland impacts associated with these activities exceeded those stipulated in the materials submitted to and approved by both the Connecticut Siting Council and Army Corps of Engineers New England Division. Increased temporary wetland impacts are associated with incidental temporary fill due to unprotected temporary soil stockpiling in wetlands and addition surface disturbance associated with minor rutting/tracking by equipment through wetlands without the use of protective matting and minor grading activities during trench backfilling. The use of the specified matting would have avoided these temporary wetland impacts. As a result, the temporary wetland impacts associated with these non-compliant (per the permit-approved Wetland Protection and Restoration Plan) activities violates the conditions of authorization as contained in both the Connecticut Siting Council and Army Corps of Engineers approvals.

Due to the direct soil disturbance associated with the unprotected tracking through wetlands and stockpiling of trenching spoils (which generally overlap with the equipment tracking area), temporary wetland impacts associated with these surface, subsurface and incidental temporary fill activities resulted in an increase from the permit-approved impact areas. Per the Connecticut Siting Council approval and Self-Verification Notification Form ("SVNF") authorization received by the Army Corps under the Connecticut General Permits for this project, ±8,500 sf of total temporary impacts were proposed of which ±1,500 sf were associated with temporary wetland impacts due to trenching activities with the remaining ±7,000 sf associated with protective matting.

Although the total area of temporary wetland disturbance did not appear to exceed the original ±8,500 sf total, the character of those impacts was not as indicated in the referenced agency application materials and approvals. APT will GPS survey in the actual area of temporary wetland disturbances during the next inspection to be performed the week of February 10th in order to develop an 'as-built' map and verify areas of impact, which will be included in the next inspection report.

As a result of these observations related to non-complaint wetland activities, the following preliminary recommendations are provided.

- Disturbed wetland areas shall have the surface area stabilized immediately with straw mulch to prevent soil erosion. This soil stabilization recommendation was completed on February 7th by the contractor.
- Wetland topsoil shall be amended with approved wetland topsoil material since native wetland topsoil was lost due to improper soil sorting procedures during utility trenching.
- Permanent vegetative stabilization/seeding shall occur once wetland topsoil placement has occurred, tentatively scheduled for the start of the 2020 growing season (late March/early April) per the permit-approved native wetland seed mix specification.
- Conduct post-construction monitoring to assess any potential short-term or long-term impacts to wetland resources during the 2020 growing season (ending in October 2020) to ensure native wetland vegetation has been permanently established and no adverse impact to wetland hydrology has occurred.

Please note that these preliminary recommendations are subject to change and may be modified/clarified/added as a result of future site inspections performed by APT as site wetland conditions are further assessed in the coming weeks.

Enclosure: Photo Documentation
Environmental Training Attendance Sheet

PHOTO DOCUMENTATION
Verizon Wireless Canterbury South CT Facility
46 Cemetery Road, Canterbury, Connecticut
Photos taken on February 5, 2020

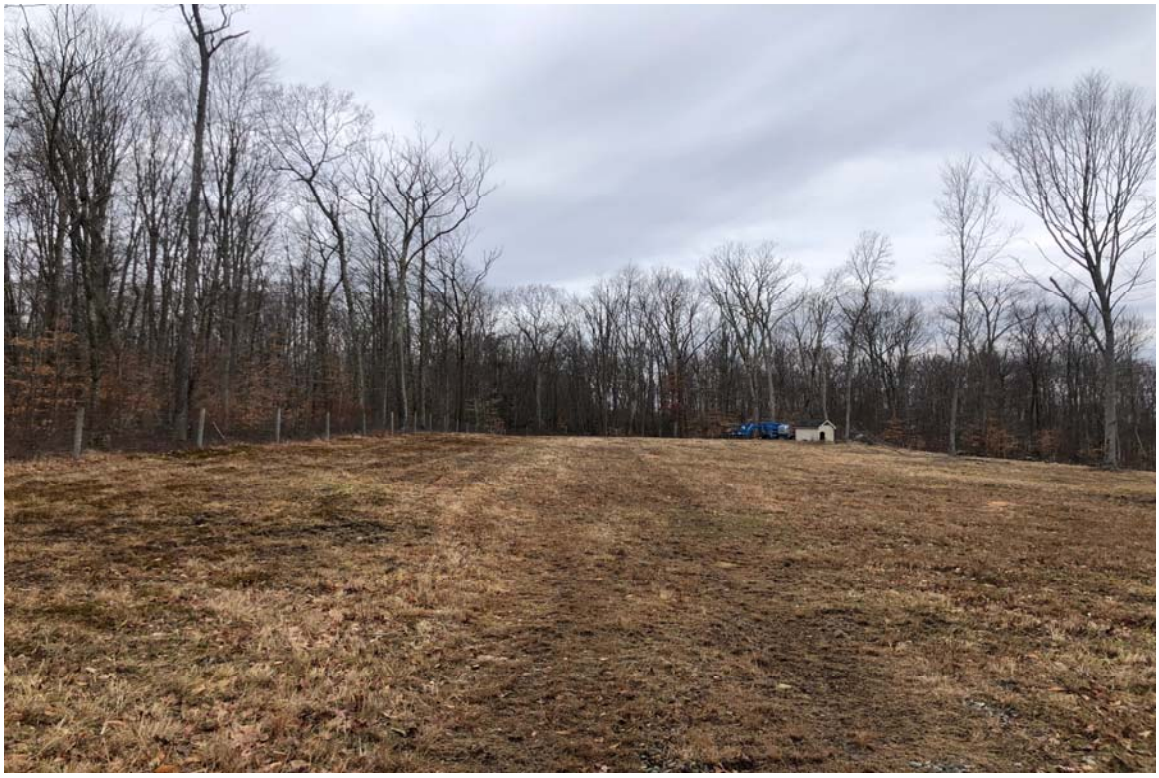

Photo 1: View of tower location at end of field.

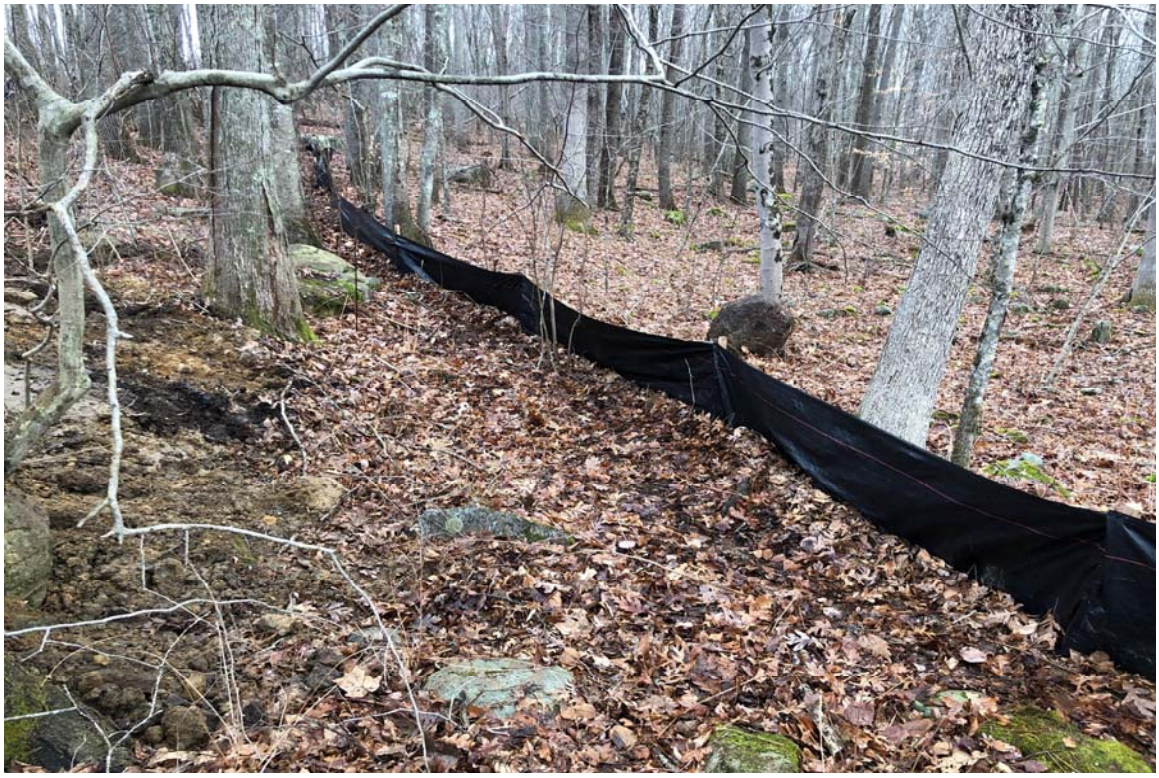

Photo 2: View of silt fence properly installed/maintained downslope of utility trenching work through Wetlands 4, 5 & 6.

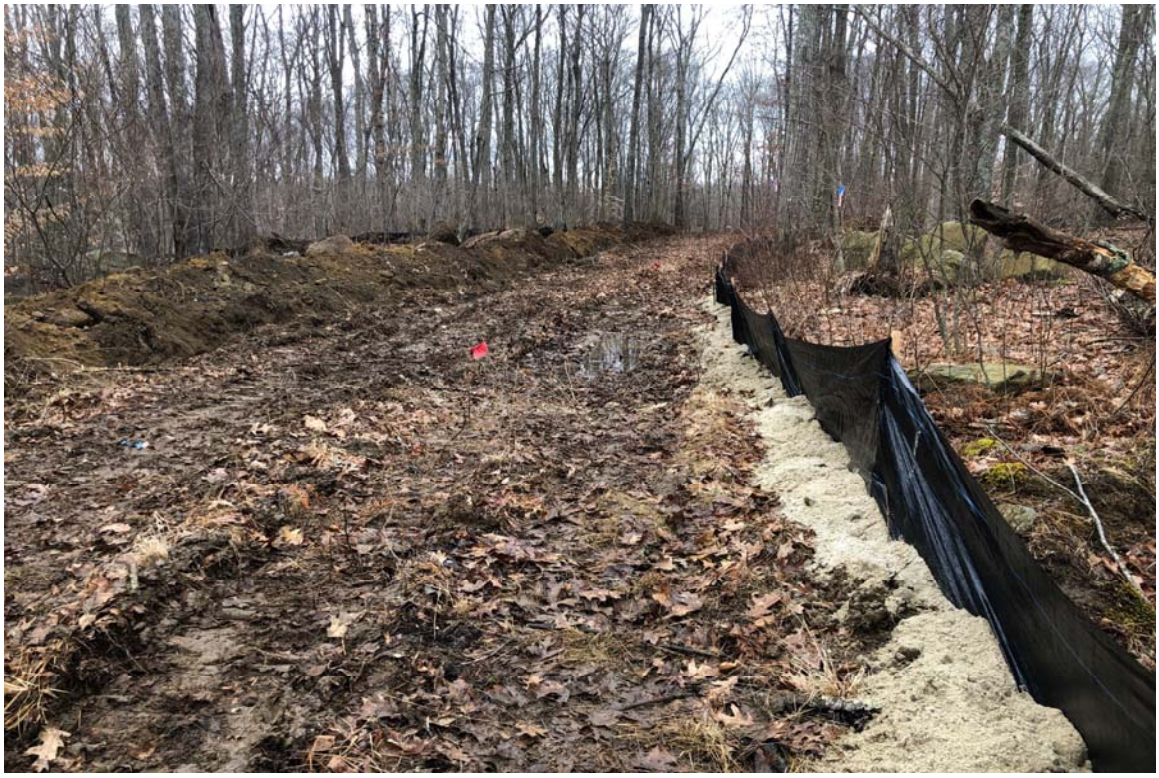

Photo 3: View of Wetland 6 utility crossing installation work with open trench located in left side of photo. Note minimal rutting through wetlands.

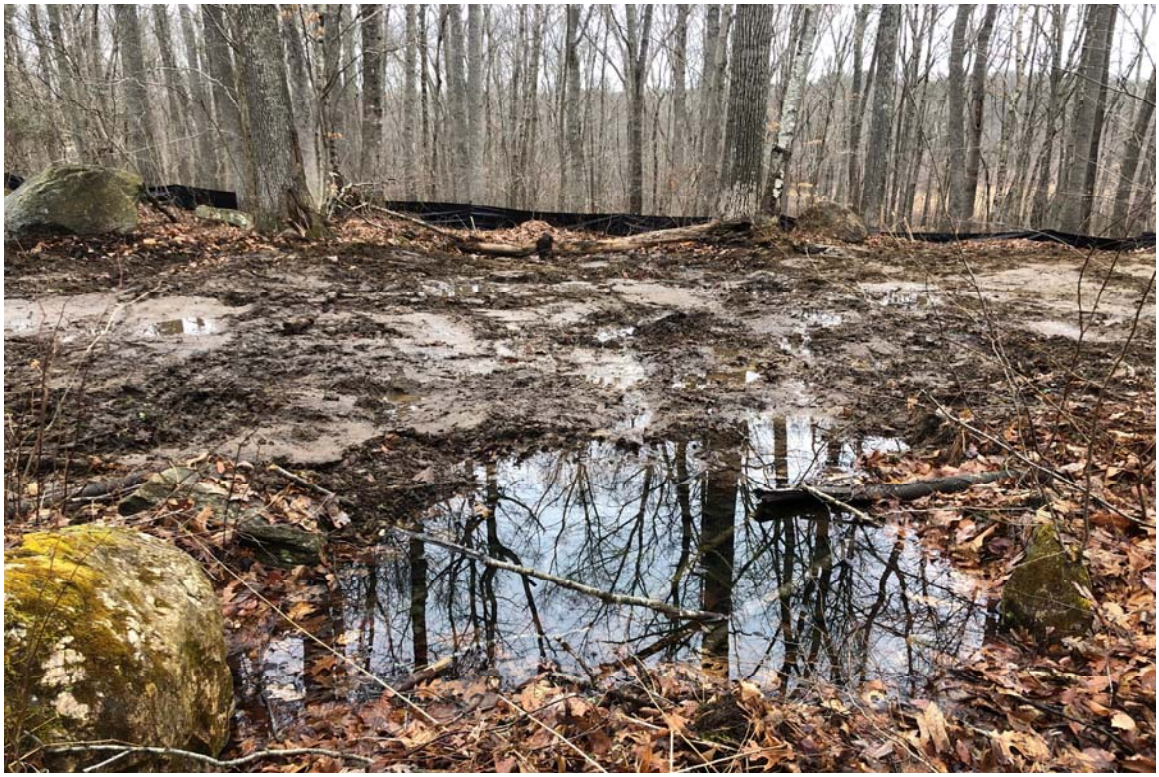

Photo 4: View of Wetland 5 utility crossing following completion of conduit installation and backfilling of trench. No significant erosion observed.

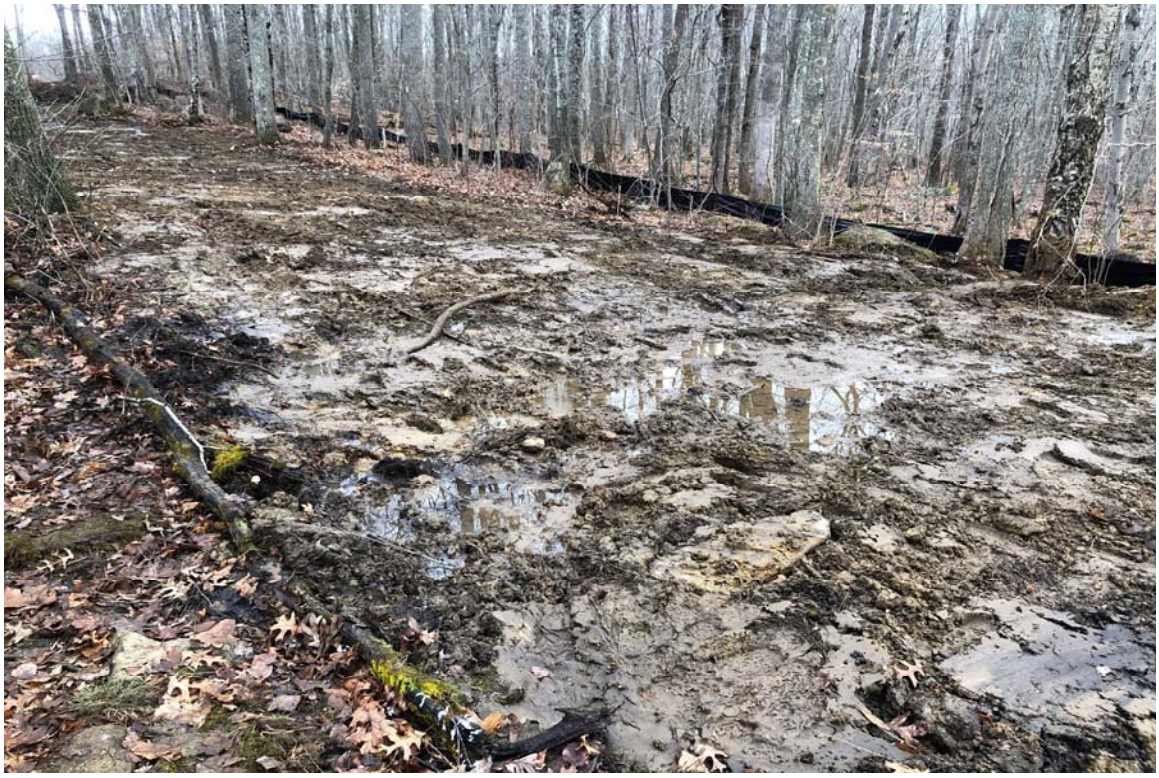

Photo 5: View of Wetland 4 utility crossing following completion of conduit installation and backfilling of trench. No significant erosion observed.

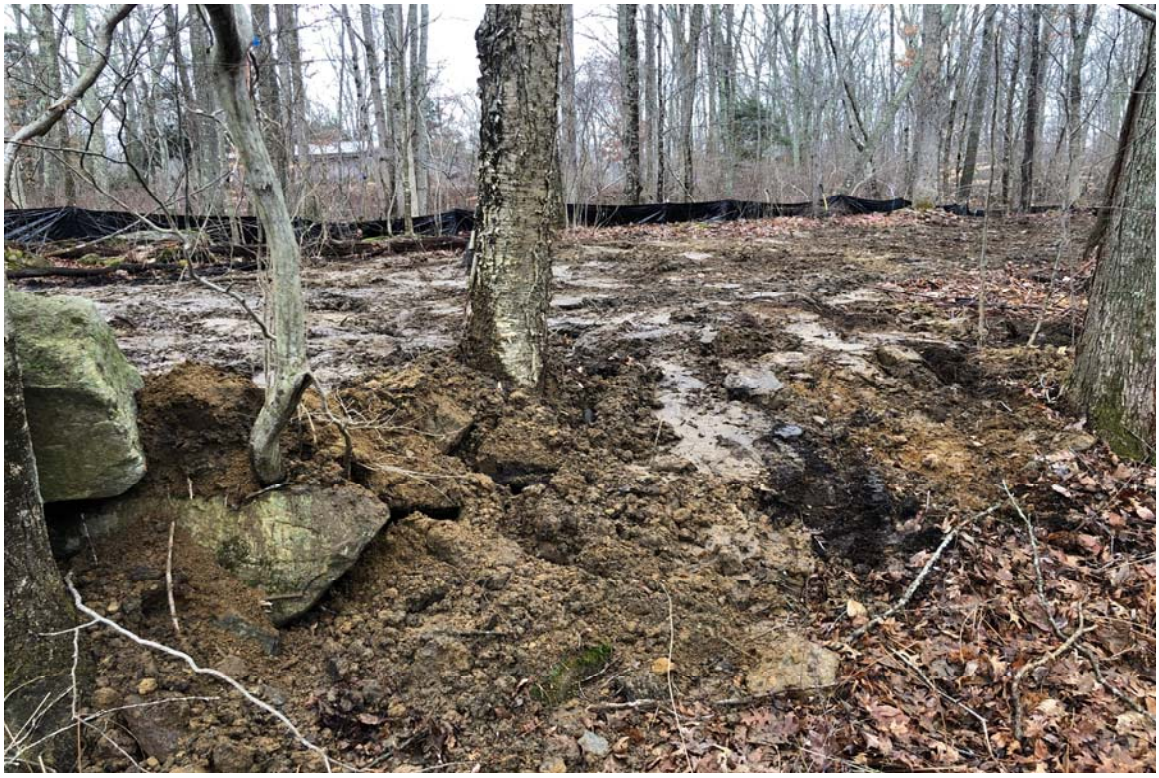

Photo 6: View of Wetland 5 utility crossing work area; downslope areas require restoration/smoothing of surface to ensure stabilization.

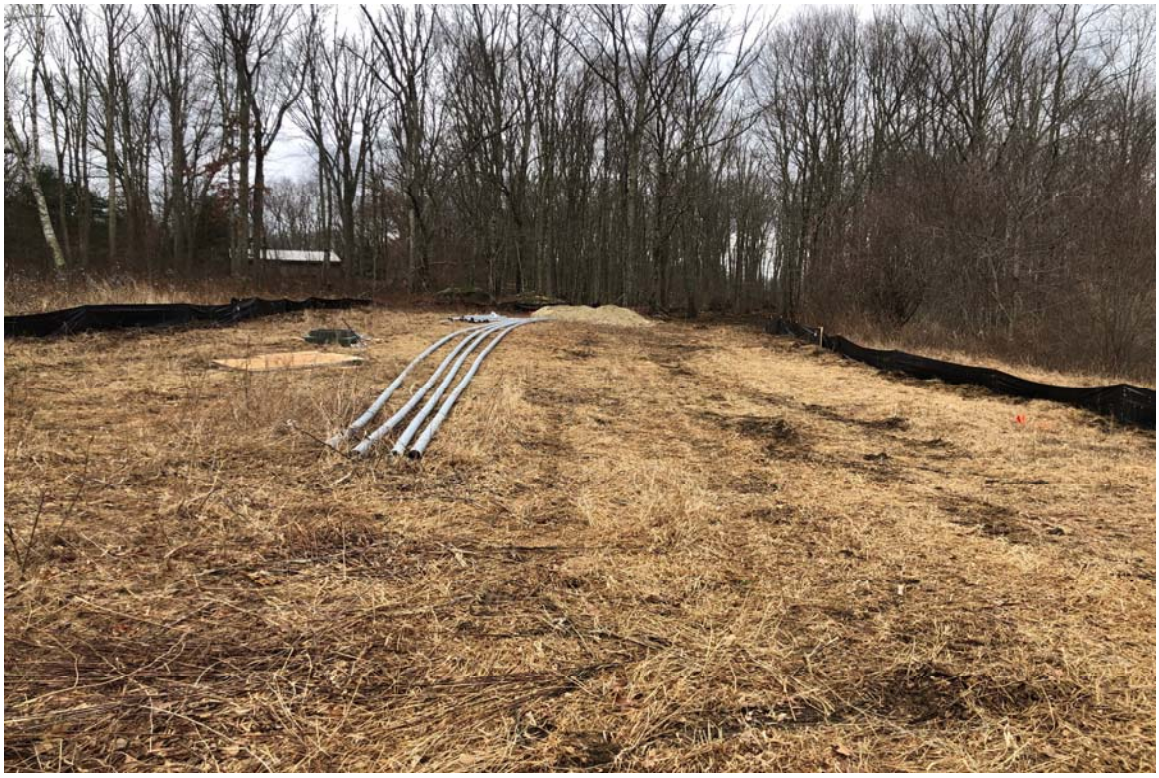

Photo 7: View of pending utility trenching work off Cemetery Road within upland field. Wetland crossing areas are located in the photo background within the forested area.

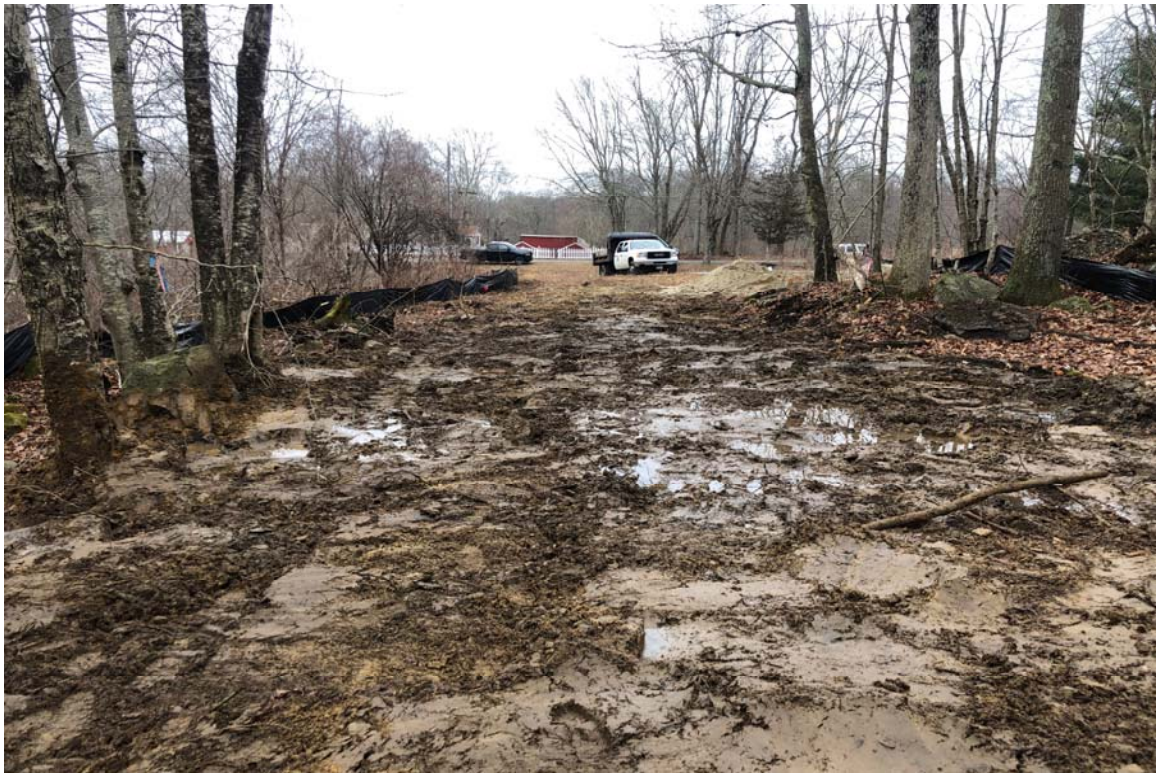

Photo 8: View of Wetland 4 utility crossing following completion of conduit installation and trench backfilling. No significant erosion observed. Cemetery Road in background beyond field.

ENVIRONMENTAL TRAINING ATTENDANCE SHEET

Project: VZW Canterbury South CT

Date of Training: February 5, 2020

Location of Training: 46 Cemetery Road, Canterbury, CT

Trained By: Matthew Gustafson, Wetland Scientist, APT

The undersigned members of Zakjak Incorporated, the General Contractor for Verizon Wireless CT project, and its subcontractors understand the environmentally sensitive nature of the project area. We are familiar with the protection plan and other environmental notes as identified on Sheet C-5 of the Construction Drawings prepared by ON Air Engineering, LLC latest revision date 06/12/18 and have received environmental training by All-Points Technology Corp., P.C. on February 5, 2020. We also understand that we are responsible for any subcontractors and their environmental training.

Print Name	Company	Signature
Michael Humphreys	SCG / VZW	
Ken Sandy	ZakJak	
James Zerio	ZakJak	
Ray Bayer	ZakJak	