



ENVIRONMENTAL MONITORING DAILY SITE OBSERVATION FORM

Report Nos. 9

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

APT Project No: CT1418090

Dates of Inspection: 7/23/20	Weather: sunny, mid, 80's
Times of Inspection: 3:00 PM	Latest Precipitation Event > ¼" (NOAA): 0.22" on 7/18/2020
Compliance Monitor:	Matthew Gustafson, Wetland Scientist
Regulatory Compliance Permitting Agency & Permit ID:	
ACOE NED <input checked="" type="checkbox"/> : NAE-2018-02520, dated November 13, 2018 CT Siting Council <input checked="" type="checkbox"/> : Docket No.477 CTDEEP IWRD <input type="checkbox"/> : N/A CTDEEP NDDDB <input type="checkbox"/> : N/A	
Resource Protection Program:	
Rare Species <input type="checkbox"/>	Species Name: N/A
Wetland Protection <input checked="" type="checkbox"/>	
Wetland Restoration <input checked="" type="checkbox"/>	
Workers Environmental Awareness Program Training Completed: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Date of Training: 2/5/2020 Signage Installed Date: 2/5/2020	
Compliance Species Observed During Inspection: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Species Name: N/A # Species: N/A	
Progress of Construction:	
Pre-Construction	<input type="checkbox"/>
Initial Exclusion Fencing Inspection	<input type="checkbox"/>
Clearing & Grubbing	<input type="checkbox"/>
Intermediate	<input checked="" type="checkbox"/>
Final Inspection	<input type="checkbox"/>

DESCRIPTION OF OBSERVED ACTIVITY	
Compliance Level:	
Communication <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Problem Area <input type="checkbox"/> <ul style="list-style-type: none"> <input type="checkbox"/> Minor exclusion fencing repair required <input type="checkbox"/> Additional exclusion fencing required <input type="checkbox"/> Additional sedimentation & erosion control measure required <input type="checkbox"/> Sediment release into upland habitat without risk of resource impact <input type="checkbox"/> Soil stabilization required Non-Compliance <input type="checkbox"/> <ul style="list-style-type: none"> <input type="checkbox"/> Sediment release into upland habitat with risk of resource impact <input type="checkbox"/> Sediment release into wetland habitat <input type="checkbox"/> Sediment release into watercourse <input type="checkbox"/> Work activities executed non-compliant with approved means/methods provided in wetland protection and restoration plan 	
Issues Requiring Corrective Action	Corrective Action Implemented
<p>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.</p>	<p>2/11/20 – All disturbed soil areas associated with the utility run/wetland crossing have been temporarily stabilized with straw mulch. No evidence of erosion is currently present, and all trenching work has been backfilled with surface impacts restored. Final restoration including seeding is pending Spring 2020.</p>
<p>CA #1 - Reinforcing surface stabilization with additional straw mulch in any disturbed ground areas not currently heavily covered in straw; Extension of the silt fence to the utility pole corner at the utility run entrance off Cemetery Road; Install additional silt fence and straw bale check dam along slope leading from the garage to Wetland 6 crossing to divert/slow stormwater flows/velocity; Separate the utility crossing off Cemetery Road from Wetland 3 crossing with caution tape to prevent unintentional access into sensitive wetland areas.</p>	<p>3/6/20</p>

<p>CA#2 – On 2/25/20, a vehicle (not associated with Verizon or the property owner) trespassed onto the Subject Property driving down the utility route. Based on observations made by the property owner, this vehicle got stuck within the Wetland 5 crossing area and created rutting throughout the Wetland 4 and 5 crossings. A tractor was used to free the stuck vehicle resulting in further rutting. Shallow rutting was observed during the 2/26/20 site inspection. Corrective actions recommended include raking out all ruts (use of heavy machinery was not recommended as they could result in further impacts to the wetland crossing areas and as the rutting was shallow, hand raking was deemed to be the most prudent action) to restore surface grades, stabilize these areas with straw mulch, install permanent stone/boulders to prevent entry, and seed all exposed areas.</p>	<p>3/31/20 Seeding has been completed. 6/19/20 Germination has occurred, permanent stabilization pending sufficient growth.</p>
<p>CA#3 – to prevent the spread and dominance of Japanese knotweed, manual removal is recommended immediately</p>	<p>7/23/20</p>
<p>Project Modification Requested:</p>	
<p>Extra work space requested <input type="checkbox"/></p> <p>Change to work area <input type="checkbox"/></p> <p>Change to stormwater feature <input type="checkbox"/></p> <p>Description of Modification: N/A</p>	
<p>Notes:</p>	
<p>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</p>	

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 recommend 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, $\pm 8,500$ sf of total temporary impacts were proposed of which $\pm 1,500$ sf were associated with temporary wetland impacts due to trenching activities with the remaining $\pm 7,000$ sf associated with protective matting.

Although the total area of temporary wetland disturbance did not appear to exceed the original $\pm 8,500$ 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.

2/11/20 – All trenching work through wetlands has been completed and back filled. Concrete trench plugs were properly installed at either end of Wetland 6. In addition, since the conduit ends at the eastern end of Wetland 4 needed to be reopened to finish the utility conduit installation out to Cemetery Road, a trench plug was installed at the eastern end of Wetland 4. All disturbed soil/limit of disturbance associated with the wetland crossings were surveyed by APT using sub-meter GPS survey equipment to determine the area of temporary impacts at each of the three temporary wetland crossings. Based on this survey, ±3,354 square feet of temporary impacts resulted from the trenching, stockpiling, and equipment access through Wetlands 4, 5, and 6; please refer to the attached Temporary Wetland Impact Map.

All disturbed soils associated with the underground utility trench work both within and adjacent to the three wetland crossings have been properly stabilized with straw mulch. Silt fence has been well maintained with no evidence of significant erosion present. It should be noted that moderate rainfall was falling during this inspection and based on site conditions present, it appears all work areas are remaining stable and no additional protective measures are required at this time. Previously recommended restoration activities are still pending and will be implemented during the start of the Spring 2020 growing season.

3/6/20 and 3/12/20 – Two inspections were performed including an initial site meeting with the contractor on March 6th to observe the condition of the three wetland crossings and also determine if additional restorative/protective actions could be implemented as a precautionary measure. At this inspection the site conditions at all three wetland crossings were observed to be stable with no problem areas noted. Several items were proposed as additional stabilization measures to provide additional protection to the wetland resources; these conservative measures exceed those required under the CT DEEP 2002 Erosion and Sedimentation Control Guidelines and the approved site plans. These measures include reinforcing of the large check dam installed at the rear of the existing garage structure leading to the utility crossing of Wetland 6; reinforcing the surface stabilization of all exposed/disturbed soils; stabilizing the surfaces of all soil stockpiles; extending the silt fence at the utility run entrance off Cemetery Road; and, separate the utility crossing off Cemetery Road from Wetland 3 crossing with caution tape to prevent unintentional access into sensitive wetland areas. All of these additional measures were completed by the contractor and inspected by APT on March 12th where all were found to have been installed correctly. As such, the Site remains stable with no evidence of active erosion or controls in disrepair.

3/26/20 – SUV drove into site and got stuck in second wetland crossing area and had to be pulled out by a tractor. Police were called but did not show up. Trying to get a police report filed.

3/31/20 – All corrective actions have been completed and all impacted areas have been raked out and rough grades restored. All destabilized soils resulting from recent vandalism related activities have been stabilized with straw mulch. A boulder barrier has been installed at the utility route entrance to prevent future encroachment into these areas. All other erosion controls remain in good working condition. Seeding of the wetland utility crossing remains pending.

5/14/20 – All disturbed soils associated with the wetland crossings have been stabilized and over seeded. Germination of the specified seed mix is pending due to recent colder temperatures. No erosion has been noted throughout the Project. Trenching work for utilities and tower foundation work remain underway.

6/19/20 – Utility trenching/conduit work has been completed and trench backfilled. Tower foundation work is also complete and backfilled. Utility route wetland crossing areas remain stable with germination occurring throughout most areas. Permanent vegetative stabilization of these areas is pending sufficient growth. Due to shading, vegetated growth remains slow and small patches of knotweed exist within an isolated patch of the wetland crossing. To prevent the spread and dominance of Japanese knotweed, manual removal is recommended immediately.

7/23/20 – All site grading and compound work is complete. Final electrical work still remains. Utility route crossing of wetland areas are approximately 50% stabilized with. All E&S controls remain in good working order.

Enclosures: Photo Documentation



Photo 1: View of access road leading to compound area.



Photo 2: View of access road with compound area in background.



Photo 3: View of utility route wetland crossing partially stabilized.



Photo 4: View of utility route wetland crossing stabilized with permanent vegetation.



Photo 5: View of utility route entrance off Cemetery Road.



Photo 6: View of well-maintained silt fence.