C-25-07

ALL-POINTS TECHNOLOGY CORPORATION

# WETLAND ASSESSMENT

May 1, 2025

Katy Gagnon, Senior Project Manager
Langan Engineering and Environmental Services
Long Wharf Maritime Center
555 Long Wharf Drive
New Haven, CT 06511

RECEIVED
MAY 02 2025
Planning & Development
Town of Waterford, CT

Re: Waterford Pickleball Courts and Parking
51 Daniels Avenue, Waterford, Connecticut
APT Job No: CT3611350

Dear Ms. Gagnon,

All-Points Technology Corporation, P.C. ("APT") understands that the Town of Waterford is acquiring ±3.96 acres of a ±19.32-acre parcel at 51 Daniels Avenue in Waterford, Connecticut to be utilized for two pickleball courts, eight (8) associated parking space and a concrete sidewalk to provide pedestrian access to the proposed courts (the "Project"). This wetland and vernal pool assessment report supplements other materials submitted under separate cover by others as part of the Waterford Conservation Commission ("WCC") Application for Permit ("Application"). This document provides an assessment of one (1) wetland and embedded vernal pool located proximate to the Project, which includes a description of the functions and values of the wetland and vernal pool, a discussion of the Project's proposed activities located in the upland review area and nearby, and an analysis of potential resource impacts associated with the proposed regulated activities. The findings of this report are based on inspections performed of the Project area and nearby wetland/vernal pool resource on September 24, 2024 and April 12, 2025 and review of project site plans prepared by Langan Engineering, dated May 1, 2025, for the Application.

The Project area consists of a ±3.96-acre area comprised primarily of maintained lawn immediately east of existing bituminous paved parking and access associated with the vacant school. The eastern edge of the Project area just encroaches into an upland forest that buffers the nearby wetland. A single wetland complex, Wetland 1, and imbedded vernal pool, Vernal Pool 1, are mainly off the eastern property boundary with the majority of the resource located site on abutting parcels. The proposed Project's development activities will avoid any direct impact to this resource area.

## Wetland Resources

Matthew Gustafson and Emily Perko, Connecticut registered Soil Scientists with APT, performed a wetland inspection of the subject property on September 24, 2024 to identify and delineate wetland resources located on and immediately proximate to the subject property. The wetland delineation methodology was performed in accordance with the Connecticut Inland Wetlands and Watercourses Act. A copy of the Wetland Inspection report, dated October 18, 2024, is enclosed along with representative photographs of the wetland features

Wetland 1 was identified on the subject property located along the eastern property boundary with the majority of the resource located off-property. Imbedded within this system breeding of vernal pool species was also confirmed during a follow-up investigation performed on April 12, 2025. This area was surveyed based on the limits of inundation observed during the spring inspection. A detailed description of wetland and vernal pool resources identified is provided below.

**Wetland Description**

Wetland 1 is located in the northeastern portion of the subject property, primarily located on the adjacent parcel, consisting of a forested complex dominated by red maple and black gum, with co-dominant of swamp white oak. The understory contains sweet pepperbush and highbush blueberry with multiflora rose along the delineated wetland boundary. The complex is characterized by seasonally saturated edges with a distinct slope break separation to the abutting upland forest to the west that is located on the property. A relatively large depressional area located entirely off the subject property is present within the interior of the wetland generally devoid of vegetation and presents indicators that a foot or more of inundation is present during peak flooding periods. Indicators include buttressed roots and moss trim lines. This depressional area was re-evaluated during the April 12, 2025 inspection to verify vernal pool breeding activity, during which time two (2) vernal pool indicator species spotted salamander (*Ambystoma maculatum*) and wood frog (*Lithobates sylvaticus*) were observed breeding within the flooded extents. Two distinct pockets of breeding within the central and southern portions of the flooded areas were observed with water depths ranging from 1.5 to 3 feet.

**Soil Classification**

Soil survey information obtained from the Natural Resources Conservation Service ("NRCS") did not identify wetland soil types either within or proximate to the Project area. However, wetlands were encountered during the wetland investigation along the eastern property boundary near the Project area. Based on available information collected during the wetland investigation the mapped wetland soil associated with the wetlands are predominately Ridgebury, Leicester and Whitman soils. Upland soils were examined along the wetland boundary and more distant upland areas during the site investigation. Those soils are dominated by the Udorthents-Urban land complex within existing developed associated with the vacant school and Charlton-Chatfield complex in the undeveloped areas. Detailed descriptions of wetland and upland soil types are provided below.

**Wetland Soils:**

**Ridgebury, Leicester and Whitman (Soil Unit 3)** soils consist of very deep, poorly to very drained soils formed in coarse-loamy or lodgement till. They are nearly level or gently sloping soils in depressions, drainageways, and low-lying positions on hills. A perched water table, or excess seepage water, is at or near the surface much of the year.

**Upland Soils:**

**Charlton-Chatfield Complex (73)** consists of very deep, well drained soils formed in loamy melt-out till. They are moderately deep to bedrock. They are nearly level to very steep soils on moraines, hills, and ridges.

**Udorthents-Urban Land Complex (306)** is a miscellaneous land type consisting mostly of disturbed soils (cutting, filling & grading) such that the original soil profile can no longer be discerned, buildings, paved roads and parking lots.

## Wetland Evaluation

There are many methods of evaluating wetlands, all incorporating different parameters to assess these resources. This study uses methodology recommended by the Corps, *The Highway Methodology Workbook Supplement, Wetland Functions and Values: A Descriptive Approach* issued by the Corps, dated September 1999. This evaluation provides a qualitative approach in which wetland functions can be considered Principal, Secondary, or unlikely to be provided at a significant level. Functions and values can be Principal if they are an important physical component of a wetland ecosystem (function only), and/or are considered of special value to society, from a local, regional, and/or national perspective. The Corps recommends that wetland values and functions be determined through "best professional judgment" based on a qualitative description of the physical attributes of wetlands and the functions and values exhibited.

The basis for APT's determination of this qualitative approach relies on over 35 years of field experience and extensive knowledge of other scientific methods used for wetland evaluation purposes.

These functions and values can be grouped into four basic categories as follows:

Biological Functions

Fish and Shellfish Habitat — This function considers the effectiveness of seasonal or permanent waterbodies associated with the wetland in question for fish and shellfish habitat.

Wildlife Habitat — This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge.

Production Export (Nutrient) — This function relates to the effectiveness of the wetland to produce food or usable products for humans or other living organisms.

Hydrologic Functions

Floodflow Alteration (Storage & Desynchronization) — This function considers the effectiveness of the wetland in reducing flood damage by attenuation of floodwaters for prolonged periods following precipitation events.

Groundwater Recharge/Discharge — This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. Recharge should relate to the potential for the wetland to contribute water to an aquifer. Discharge should relate to the potential for the wetland to serve as an area where groundwater can be discharged to the surface.

Water Quality Functions

Sediment/Toxicant/Pathogen Retention — This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens.

Nutrient Removal/Retention/Transformation — This function relates to the effectiveness of the wetland to prevent adverse effects of excess nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

Sediment/Shoreline Stabilization — This function relates to the effectiveness of a wetland to stabilize streambanks and shorelines against erosion.

Societal Values

Recreation (Consumptive and Non-Consumptive) — This value considers the effectiveness of the wetland and associated watercourses to provide recreational opportunities such as canoeing, boating, fishing, hunting, and other active or passive recreational activities. Consumptive activities consume or diminish the plants, animals, or other resources that are intrinsic to the wetland, whereas non-consumptive activities do not.

Educational/Scientific Value — This value considers the effectiveness of the wetland as a site for an "outdoor classroom" or as a location for scientific study or research.

Uniqueness/Heritage — This value relates to the effectiveness of the wetland or its associated waterbodies to produce certain special values. Special values may include such things as archaeological sites, unusual aesthetic quality, historical events, or unique plants, animals, or geologic features.

Visual Quality/Aesthetics — This value relates to the visual and aesthetic qualities of the wetland.

Threatened or Endangered Species Habitat — This value relates to the effectiveness of the wetland or associated waterbodies to support threatened, endangered or special concern species.

The degree to which a wetland provides each of these functions is determined by one or more of the following factors: landscape position, substrate, hydrology, vegetation, history of disturbance, and size. Each wetland may provide one or more of the listed functions at Principal levels.

The determining factors that affect the level of function provided by a wetland can often be broken into two categories. The effectiveness of a wetland to provide a specified function is generally dependent on factors within the wetland whereas the opportunity to provide a function is often influenced by the wetland's position in the landscape and adjacent land uses. For example, a depressed wetland with a restricted outlet may be considered highly effective in trapping sediment due to the long residence time of runoff water passing through the system. If this wetland is located in gently sloping woodland, however, there is no significant source of sediment in the runoff therefore the wetland is considered to have a small opportunity of providing this function.

A summary description of functions and values is provided below.

**Biological Functions:**

The ecological integrity of Wetland 1 has been compromised due to proximity to developed areas indicative of the bordering invasive species. Fragmented upland habitat buffering this wetland has occurred with the existing school development to the west, Daniels Avenue to the north and residential properties to the east. As a result, wildlife utilization would largely be used by generalists and species habituated to the high level of human activity that exists both on the subject property and in the surrounding area. This wetland maintains sufficient hydrology to support vernal pool breeding habitat throughout the complex but does not maintain permanent inundation to support finfish habitat. Although the ecological integrity has been compromised, wildlife habitat function is supported within Wetland 1 at a Principal level due largely to confirmed breeding by two obligate vernal pool species.

The wetland consists of a common vegetative class of palustrine forest cover type with shrub and herbaceous understory. However, there is not a large diversity of wetland cover types so there is a limited potential to produce food for several different types of wildlife that require diverse or specific wetland habitats beyond the forest habitat that is present. Therefore, this wetland is assessed as supporting the production export (nutrient) function at a Secondary level based on the fruit bearing shrubs observed in the resource.

**Hydrologic Functions:**

Wetland 1 does not border a perennial watercourse with an active floodplain, floodflow alteration is only supported at a Secondary level within Wetland 1 due to the potential for this system to support flood storage from stormwater runoff since it essentially functions as a confined basin. This wetland receives groundwater discharges from hillside seepage providing the potential for both water discharge and recharge to the local groundwater. Due to this factor, the wetland was assessed as supporting the groundwater discharge/recharge function at a Principal level.

**Water Quality:**

The developed surrounding environment provides an opportunity for this wetland to provide sediment/toxicant/pathogen retention and nutrient removal/retention/transformation functions. This wetland currently receives some stormwater flow from the subject property and adjacent school development through sheet flow. Based on the resource size and location of Wetland 1 there is a potential to support these water quality functions but the size limits the function to a Secondary level. Wetland 1 does not have the potential for sediment/shoreline stabilization since it does not border on a perennial stream or open water body that would generate high flow velocities during storm events or wave action.

**Societal Values:**

Wetland 1, consisting of a forested wetland type that supports vernal pool habitat is easily accessible by the public, and is associated with a school, supports an opportunity for various societal values. However, due to a lack of hunting or fishing opportunities, this wetland supports recreation value at a Secondary level. This wetland supports educational/scientific value at a Principal level due to the ease of access, proximity to a unique wetland habitat with breeding by vernal pool species, and future use of the property as a public school. In addition, this wetland supports visual/aesthetics value at a Secondary level due to the proximity of development and obstructive intervening vegetation from any publicly viewable areas. The uniqueness/heritage value of this wetland is diminished by the lack of: archaeological sites; unusual aesthetic quality; historical events; or unique plants, animals, or geologic features. As such, Wetland 1 does not support the uniqueness/heritage value at a Principle or Secondary level.

Urban wetland quality values are supported by Wetland 1 at a Secondary level, since this wetland is generally surrounded by development but does support some habitat for wildlife particularly for vernal pool species.

**Threatened or Endangered Species Habitat:**

No State-listed Threatened, Endangered or Special Concern species are known to utilize the subject property, or its wetlands based on available mapping (December 2024) from the Connecticut Department of Energy & Environmental Protection ("DEEP") Natural Diversity Data Base ("NDDB"). The nearest NDDB buffer area is located ±0.18 mile to the northeast in nearby Millstone Brook riparian corridor. As such, consultation with DEEP NDDB is not required for this project. Due to the relatively small forest patch size, limited size of the wetland resource, development on the subject property and abutting properties, the potential wildlife habitat value for rare species would be limited and is not considered to be supported at either a Principle or Secondary level.

## Proposed Activities

The following section summarizes development activities. The WCC regulates activities in wetland and watercourses and upland areas within 100 feet of wetlands and watercourses, known as an upland review area ("URA") that are likely to impact wetlands and watercourses and not otherwise deemed as-of-right or non-regulated activities.

The proposed development will avoid direct impacts to Wetland 1 and Vernal Pool 1. However, the proposed Project will require temporary disturbances in the URA such as limited vegetation clearing, grubbing, and grading to accommodate the pickleball courts and parking area. Such activities will result in ±3,870 SF of work within the 100-foot URA with the closest activity ±63 feet from the nearest wetland area. Please note that proposed activities in the URA do not include any impervious surfaces or stormwater management features and are limited mainly to minor grading activities. Those areas will be restored with native trees, shrubs and herbaceous plants and grasses as discussed in detail in the mitigation section of this report. In addition, minimal disturbance would result within 100 feet of the vernal pool edge, also known as the vernal pool envelope ("VPE"). Although there is a slight encroachment into the VPE, the development would not impact primary migratory corridors of two identified vernal pool species; this topic is discussed in greater detail in the subsequent section.

## Wetland and Vernal Pool Impact Analysis

The fundamental concept of wetland and vernal pool impact analysis is based on the precept that wetland and vernal pool impacts should first be avoided where possible. Secondly, if practicable alternatives do not exist to avoid wetland impacts, then impacts should be minimized. Thirdly, mitigation should be considered for unavoidable wetland impacts, with consideration given to the loss of wetland functions and values that are important to the local region.

As previously discussed, the pickleball court development will avoid any direct impact to wetland or vernal pool resources. Areas of proposed activity within the 100-foot URA to Wetland 1 consist of vegetation clearing, grubbing and regrading needed for the installation of eight (8) parking spaces, two pickleball courts, and a concrete sidewalk. The parking area, sidewalk, and courts, both impervious surfaces, are located outside of the 100-foot URA. Upland review areas can serve a number of important functions that support wetlands and watercourses including water quality protection (erosion control and sediment, nutrient, biological and toxics removal), hydrologic event modification and wildlife habitat. While portions of the upland edge forest will be removed to accommodate for the development, the majority of the development area consists of maintained lawn which experiences routine disturbance and maintenance, such functions are not being supported in a significant capacity.

Construction and operation of the courts would not result in direct physical impact to Vernal Pool 1; however, minor grading will just encroach within 100 feet of the vernal pool edge, also known as the vernal pool envelope ("VPE"). It is widely documented that vernal pool dependent amphibians are not solely reliant upon the actual vernal pool, which is limited to use for breeding and egg/larval development, and require surrounding upland forest habitat for most of their adult lives. Intact forest represents the highest value, or optimal, habitat within the VPE and adjacent areas to support breeding opportunities for the various obligate vernal pool indicator species that rely on forested habitat (e.g., wood frog and spotted salamander). The US Army Corps of Engineers New England District's *Vernal Pool Best Management Practices* ("BMPs") also establish the concept of "directional corridors" (identified herein as "Migratory Corridors"). Identification of Migratory Corridors allow a project to evaluate potential impacts to optimal pool-breeding amphibian habitat that focuses on conserving the most essential habitats which link breeding pools, forested wetlands, and forested uplands. These interrelated habitats form essential migratory corridors at a landscape scale level. The location of Migratory Corridors is established through an evaluation of both wetland and terrestrial habitat structure qualities (e.g., vegetative cover types, width of vegetated buffer, soil surface moisture, thickness of duff layer, abundance of cover objects, etc.) that determines the locations of "Suitable Non-Breeding Habitat" and "Non-Habitat" in proximity to the vernal pool. Non-habitat areas such as developed areas, maintained lawn, and large expanses of impervious surface do not support Migratory Corridors due to the lack of sufficient vegetative conditions which are often associated with higher levels of predation and high level of human activity that can result in direct mortality. For the subject property which is dominated by the existing school development and includes the school building, relatively large areas of paved parking and access, and regularly maintained athletic fields and lawn, represents a large area of Non-Habitat located west of Vernal Pool 1. This large area of Non-Habitat provides no vegetative cover for migratory wood frogs or salamanders, which would expose these amphibians to desiccation and high levels of predation. This existing development separates the vernal pool habitat from other forested areas thereby eliminating a potential Migratory Corridor to the west.

Migratory Corridors occur in areas that link vernal pools and Suitable Non-Breeding Habitat, which consists of both forested wetland and upland habitats. The principal Migratory Corridors associated with Vernal Pool 1 are located to the south and east of the resource area linking adjacent and somewhat continuous upland and wetland forested habitats. Although residential properties are located proximate to these principal Migratory Corridors, there is significantly less landscape-level anthropogenic changes when compared to the expansive school development, that still maintains a relatively large forested habitat block to accommodate these Migratory Corridors. The proposed redevelopment does not intercept this Migratory Corridor.

There is the potential for short term wetland impacts during construction due to the proximity of wetland resources and proposed site work associated with grading and vegetation removal activities. The potential for these short-term impacts is mitigated with the implementation and maintenance of a comprehensive soil erosion and sediment control plan, as detailed on the separately attached project site plans that were developed in accordance with *2024 Connecticut Guidelines For Soil Erosion and Sediment Control*. The installation of silt fence and employment of additional erosion control Best Management Practices ("BMPs") would function as an effective isolation barrier for possible migrating herpetofauna from encountering construction. Additionally, a Wetland and Vernal Pool Protection Plan will include contractor education and awareness signage of the nearby sensitive wetland resources, including the vernal pool habitat and associated herpetofauna (i.e., wood frog, salamanders, turtles, snakes, etc.) that could be encountered.

## Mitigation

Due to the proposed development located in proximity to Wetland and Vernal Pool 1 and encroaching into the URA, an upland review area/vernal pool terrestrial enhancement area is proposed. Careful consideration has been given to devising a mitigation plan that enhances the wetlands functions and values, particularly wildlife habitat that would most benefit the vernal pool habitat, through enhancing critical upland. To compensate for the unavoidable temporary URA activities totaling ±3,870 SF, a mitigation plan consisting of planting areas that will be altered with grading activities and associated vegetation removal is proposed. Enhancement of ±8,000 SF of the 100-foot URA and adjacent areas will consist of planting with various native trees and shrubs that will be under sown with a native conservation/wildlife seed mix. The proposed planting plan not only improves wildlife habitat functions it also provides both good erosion control. This mitigation plan will support a variety of wetland functions and values with a primary focus on improving wildlife habitat and providing wooded terrestrial habitat to support the vernal pool habitat contained within Wetland 1. The variety of native shrubs selected for the enhancement area produce flowers that are attractive to pollinator species (also enhances the aesthetic value) and fruits that provides a wildlife food source. Water quality functions will also be enhanced in a secondary capacity along with aesthetics value with use of a wide variety of flowering plants. With the enhancement area supporting important functions and values to the URA, both Wetland 1 and its associated vernal pool habitat functions and values will be improved.

The URA proposed for enhancement is depicted in the separately attached project site plans. A summary of the mitigation plan is provided below, including planting schedules, construction sequencing notes, and construction and long-term post construction monitoring of the mitigation area.

**Table 1: Planting Schedule - Upland Review/Vernal Pool Terrestrial Enhancement Area**

| Quantity | Botanical Name | Common Name | Size | Spacing |
|---|---|---|---|---|
| 10 | *Acer rubra* | Red Maple | 6-8' | 10-20 feet |
| 20 | *Amelanchier canadensis* | Serviceberry | 3-4' | 7-10 feet |
| 40 | *Cornus racemosa* | Gray Dogwood | 3-4' | 7-10 feet |
| 40 | *Morella pensylvanica* | Bayberry | 3-4' | 7-10 feet |
| 40 | *Photinia melanocarpa* | Black chokeberry | 3-4' | 7-10 feet |
| 40 | *Viburnum lentago* | Nannyberry | 3-4' | 7-10 feet |

Planting Schedule Notes:

1. The ±8,000 SF enhancement area will consist of planting with select native shrubs and trees following grading activities and placement of topsoil to establish a dense buffer of woody plants that will enhance water quality and wildlife habitat functions for the adjacent wetland and vernal pool habitat.
2. Planting stock used in the enhancement area shall be inspected for pests, disease and overall health to ensure suitable specimens are used. Unsuitable specimens will be rejected and replaced with suitable specimens. Any planting substitutions must be approved by the Project Wetland Scientist. All woody plant stock shall be container-grown or burlap balled. Deviations to the planting plan must be approved by the Project Wetland Scientist. Only plant materials native and indigenous to Connecticut shall be used. Invasive plant species will not be used in the mitigation area.
3. Under sow enhancement area with a New England Conservation/Wildlife Seed Mix (New England Wetland Plants, Inc., or approved equivalent). Seed mix shall be applied at the manufacturer's recommended seeding rate and protected with a weed-free straw mulch or hydroseeded with a

bonded fiber matrix. Permanent cover of native grasses and forbs will provide both good erosion control and wildlife habitat value.

4. All plant materials installed shall meet or exceed the specifications of the "American Standards for Nursery Stock" by the American Association of Nurserymen. All plant materials shall be guaranteed for one year following date of final acceptance. No cultivars of the native plants identified in the planting schedule shall be used unless approved by the Project Wetland Scientist.
5. Tree and shrub spacing is provided for general purposes. Actual locations of plants to be adjusted in the field based on available space. The Project Wetland Scientist will assist in selecting planting locations and spacing to simulate nature growth patterns.
6. Plant black chokeberry, serviceberry, and bayberry along edge of clearing as species prefer full sun in order to set heavier fruit. All other trees and shrubs are shade tolerant.

Mitigation Monitoring Success Standards and Reporting Notes:

1. The buffer enhancement area will be assessed using three success standards as described; Success standard 1: any soils disturbed by enhancement activities are stabilized and no significant erosion or sediment deposition is observed 2: at least 75% of the aerial surface of the enhancement areas are established with native species, including 50% aerial cover by native shrubs and 75% herbaceous species 3: control of non-native invasive woody shrub species with less than 10% total aerial coverage by the end of the monitoring period.
2. A report will be prepared documenting implementation of the upland enhancement plan, including planting of native species.
3. Monitoring of the upland enhancement area will be performed for period of two years starting the first full growing season following project completion and native planting activities. Monitoring will occur once each growing season, once in the spring and again in the late summer/early fall. An annual monitoring report will provide an assessment of the conditions of the enhanceemnt area, measuring success against the three success standards. The monitoring report will include representative photogaphs, the percent survival of planted tree and shrubs and will also include observations of vegetation health and development along with any wildlife observations. The report will also document corrective actions taken to address non-compliance with the success standards. If following completion of this two-year monitoring period not all of the success standards are satisfied, recommendations for additional monitoring/corrective actions will be included in the final report.

**Wetland and Vernal Pool Protection Plan**

As a result of the proposed development's location in the vicinity of wetlands and vernal pool, the following protection plan is provided to avoid unintentional impact to wetland and vernal pool habitats and associated herpetofauna during construction activities. Complete details of the recommended wetland and vernal pool are enclosed with a summary provided below. Upon permit approval, this protection plan will be incorporated into the construction drawings to ensure the Contractor is fully aware of the project's environmentally sensitive setting and the required protection measures.

A wetland scientist from APT experienced in compliance monitoring of construction activities will serve as the Environmental Monitor for this project to ensure that the following BMPs are implemented properly. The proposed wetland and vernal pool protection program consists of several components including: periodic inspection and maintenance of erosion controls and isolation structures; education of all contractors and sub-contractors prior to initiation of work on the site; protective measures; wildlife sweeps to remove any wildlife from work areas; and reporting.

APT recommends establishing a wetland and vernal pool protection program consisting of contractor awareness training prior to initiation of construction activities. The contractor training session would stress the sensitive nature of the project, what species might be encountered and what to do if they are present. In addition, the wetland protection program would include an initial inspection of the silt fence erosion and sedimentation controls that will serve double duty as a restrictive barrier to possible species dispersal into the construction site from the nearby wetland and vernal pool. Provided the wetland protection program is properly implemented during construction, it is APT's opinion that potential short-term impacts to nearby wetland and vernal pool resources would not occur.

**Summary and Conclusion**

The proposed pickleball court development will not directly impact wetland or vernal pool resources. In addition, activities proposed in the 100-foot URA will be limited to minor grading and vegetation removal activities primarily located in areas immediately adjacent to the existing school development. A comprehensive suite of erosion and sedimentation control measures in addition to a Wetland and Vernal Pool Protection Plan will be implemented during construction to prevent direct and indirect impacts to nearby wetland and vernal pool resources during construction. In addition, to compensate for the temporary encroachment of ±3,870 SF into the 100-foot URA, a comprehensive mitigation plan that will provide ±8,000 SF of an upland review/vernal pool terrestrial enhancement area will improve functions and values supporting the nearby wetland and vernal pool habitat.

Considering the proposed development activities avoid any direct wetland and vernal pool impact, work is limited to the outer URA, and extensive protection, conservation, and mitigation measures will be employed both during and following construction activities, it is our professional opinion that no likely adverse impact to wetland and vernal pool resources would result.

Based on the findings of this assessment, we respectfully request that the Town of Waterford Conservation Commission serving as the Inland Wetlands Agency find this project and the various conservation and mitigation measures are adequately protective of the interests contained in the Town of Waterford Inland Wetlands and Watercourses Regulations and issue a wetland permit approving the proposed regulated activity.

If you have any questions regarding the above-referenced information, please feel free to contact me by telephone at (860) 552-2033 or at dgustafson@allpointstech.com.

Sincerely,

All-Points Technology Corporation, P.C.

Dean Gustafson
Professional Soil Scientist
Senior Wetland Scientist

Enclosures

# Wetland Inspection Report

ALL-POINTS TECHNOLOGY CORPORATION

# WETLAND INSPECTION

**October 18, 2024** **APT Project No.: CT3611350**

**Prepared For:** Langan Engineering and Environmental Services
Long Wharf Maritime Center
555 Long Wharf Drive, New Haven, CT 06511

**Site Address:** 51 Daniels Avenue, Waterford, Connecticut

**Date of Investigation:** 9/25/2024

**Field Conditions:** **Weather:** cloudy, mid 60's
**Soil Moisture:** dry to moist

**Wetland/Watercourse Delineation Methodology**[1]**:**

☒Connecticut Inland Wetlands and Watercourses
☐Connecticut Tidal Wetlands
☐U.S. Army Corps of Engineers

**Municipal Upland Review Area:** **Wetlands:** 100 feet **Watercourses:** 100 feet

The wetlands inspection was performed by[2]:

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.*[3] *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.*

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

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

[3] *APT has relied upon the accuracy of information provided by Langan Engineering and Environmental Services regarding the location and limits of the Study Area for the purposes of identifying wetlands and watercourses.*

# Attachments

- Wetland Delineation Field Forms
- Wetland Inspection Map

# Wetland Delineation Field Form

| | | |
|---|---|---|
| Wetland I.D.: | Wetland 1 | |
| Flag #'s: | WF 1-01 to 1-22 | |
| Flag Location Method: | Site Sketch ☒ | GPS (sub-meter) located ☒ |

**WETLAND HYDROLOGY:**

**NONTIDAL ☒**

| | | |
|---|---|---|
| Intermittently Flooded ☐ | Artificially Flooded ☐ | Permanently Flooded ☐ |
| Semipermanently Flooded ☐ | Seasonally Flooded ☒ | Temporarily Flooded ☐ |
| Permanently Saturated ☐ | Seasonally Saturated/seepage ☒ | Seasonally Saturated/perched ☐ |
| Comments: Wetland 1 consist of a seasonally flooded interior with bordering saturated edges following a distinct slope break to the abutting upland forest. | | |

**TIDAL ☐**

| | | |
|---|---|---|
| Subtidal ☐ | Regularly Flooded ☐ | Irregularly Flooded ☐ |
| Irregularly Flooded ☐ | | |
| Comments: None | | |

**WETLAND TYPE:**

**SYSTEM:**

| | | |
|---|---|---|
| Estuarine ☐ | Riverine ☐ | Palustrine ☒ |
| Lacustrine ☐ | Marine ☐ | |
| Comments: None | | |

**CLASS:**

| | | |
|---|---|---|
| Emergent ☐ | Scrub-shrub ☐ | Forested ☒ |
| Open Water ☐ | Disturbed ☐ | Wet Meadow ☐ |
| Comments: Closed canopy hardwood forest consisting of red maple and black gum with co-dominant swamp white oak | | |

**WATERCOURSE TYPE:**

| | | |
|---|---|---|
| Perennial ☐ | Intermittent ☐ | Tidal ☐ |
| Watercourse Name: None | | |
| Comments: None | | |

## Wetland Delineation Field Form (Cont.)

**SPECIAL AQUATIC HABITAT:**

| | |
|---|---|
| Vernal Pool Yes ☐ No ☐ Potential ☒ | Other ☐ |
| Vernal Pool Habitat Type: 'Cryptic' | |
| Comments: A large depressional area was identified void of vegetation containing buttressed roots and moss trim lines indicating inundation is present during month of elevated water levels. This depressional area did not contain any flooding at the time of inspection. An adult wood frog was observed within the depressional limits. It is recommended a formal vernal pool investigation be performed during the spring breeding season to determine the presence of obligate vernal pool breeding. | |

**SOILS:**

| | | |
|---|---|---|
| Are field identified soils consistent with NRCS mapped soils? | Yes ☒ | No ☐ |

**DOMINANT PLANTS:**

| | |
|---|---|
| Red Maple (Acer rubrum) | Black Gum (Nyssa sylvatica) |
| Swamp White Oak (Quercus bicolor) | Sweet Pepperbush (Clethera alnifolia) |
| Highbush Blueberry (Vaccinium corymbosum) | Multiflora Rose* (Rosa multiflora) |
| Sensitive Fern (Onoclea sensibilis) | Cinnamon Fern (Osmunda cinnamomea) |
| Poison Ivy (Toxicodendron radicans) | Greenbrier (Smilax rotundifolia) |

* denotes Connecticut Invasive Species Council invasive plant species

**GENERAL COMMENTS:**

All-Points Technology Corp., P.C. ("APT") investigated property at 51 Daniels Avenue in Waterford, Connecticut ("Site"). The ±20-acre town-owned parcel is developed with the former Waterford Dual Language & Arts Magnet Middle School, which is currently vacant, and wireless telecommunications facility located in the southeast corner of the Site. The vacant school building and associated infrastructure occupies the northern and central portion of the Site along with open fields that extend to the western and southern portions of the property. Successional forest and scrub/shrub habitats are present along the Site's eastern and western boundaries. APT soil scientists identified and delineated three (3) wetland systems that are primarily located on adjacent parcels with some encroachment into the Site.

Wetland 1 is located in the northeastern portion of the Site, primarily located on the adjacent parcel, consisting of a forested complex dominated by red maple and black gum, with co-dominant of swamp white oak. The understory contains sweet pepperbush and highbush blueberry with multiflora rose along the delineated wetland boundary. The complex is characterized by seasonally saturated edges with a distinct slope break separation to the abutting upland forest to the west that is located on the Site. A large depressional area is present within the interior of the wetland generally devoid of vegetation and presents indicators that a foot or more of inundation is present during peak flooding periods. Indicators include buttressed roots and moss trim lines. This depressional area, which appears to be entirely located on the adjacent property, has the potential to support breeding habitat for vernal pool indicator species.

# Wetland Delineation Field Form

| | | |
|---|---|---|
| Wetland I.D.: | Wetland 2 | |
| Flag #'s: | WF 2-01 to 2-14 | |
| Flag Location Method: | Site Sketch ☒ | GPS (sub-meter) located ☒ |

**WETLAND HYDROLOGY:**

**NONTIDAL ☒**

| | | |
|---|---|---|
| Intermittently Flooded ☐ | Artificially Flooded ☐ | Permanently Flooded ☐ |
| Semipermanently Flooded ☐ | Seasonally Flooded ☒ | Temporarily Flooded ☐ |
| Permanently Saturated ☐ | Seasonally Saturated/seepage ☒ | Seasonally Saturated/perched ☐ |
| Comments: Wetland 2 consists of a seasonally saturated complex with interior seasonal flooding containing two depressional areas. | | |

**TIDAL ☐**

| | | |
|---|---|---|
| Subtidal ☐ | Regularly Flooded ☐ | Irregularly Flooded ☐ |
| Irregularly Flooded ☐ | | |
| Comments: None | | |

**WETLAND TYPE:**

**SYSTEM:**

| | | |
|---|---|---|
| Estuarine ☐ | Riverine ☐ | Palustrine ☒ |
| Lacustrine ☐ | Marine ☐ | |
| Comments: None | | |

**CLASS:**

| | | |
|---|---|---|
| Emergent ☐ | Scrub-shrub ☐ | Forested ☒ |
| Open Water ☐ | Disturbed ☐ | Wet Meadow ☐ |
| Comments: Forested complex dominated by red maple with co-dominant black gum. | | |

**WATERCOURSE TYPE:**

| | | |
|---|---|---|
| Perennial ☐ | Intermittent ☐ | Tidal ☐ |
| Watercourse Name: None | | |
| Comments: None | | |

## Wetland Delineation Field Form (Cont.)

**SPECIAL AQUATIC HABITAT:**

| | |
|---|---|
| Vernal Pool Yes ☐ No ☐ Potential ☒ | Other ☐ |
| Vernal Pool Habitat Type: 'Cryptic' | |
| Comments: Two potential vernal pools were identified within seasonally flooded areas in the northern and southern limits of the complex. It is recommended that a formal vernal pool investigation be performed during the spring breeding season to determine the presence of obligate vernal pool breeding. | |

**SOILS:**

| | | |
|---|---|---|
| Are field identified soils consistent with NRCS mapped soils? | Yes ☒ | No ☐ |

**DOMINANT PLANTS:**

| | |
|---|---|
| Red Maple (Acer rubrum) | Highbush Blueberry (Vaccinium corymbosum) |
| Multiflora Rose* (Rosa multiflora) | Sweet Pepperbush (Clethera alnifolia) |
| Greenbrier (Smilax rotundifolia) | Royal Fern (Osmunda regalis) |
| Sensitive Fern (Onoclea sensibilis) | Cinnamon Fern (Osmunda cinnamomea) |
| Poison Ivy (Toxicodendron radicans) | Black Gum (Nyssa sylvatica) |

* denotes Connecticut Invasive Species Council invasive plant species

**GENERAL COMMENTS:**

Wetland 2 is located off the southeast corner of the Site on the adjacent property. Similar to Wetland 1, saturated edges border interior seasonally flooded areas. Potential vernal pool habitat was identified within the northern and southern extents of the system. Portions of the complex have experienced varying degrees of historic alteration with a stonewall intersecting the system resulting in altering of the drainage within the southern limits and a dominance of multiflora rose and green briar present. The overstory was dominated by red maple with inclusions of black gum. The southern and central wetland extents are characterized by a broad transitional area consisting of a shallow slope break.

# Wetland Delineation Field Form

| | | |
|---|---|---|
| Wetland I.D.: | Wetland 3 | |
| Flag #'s: | WF 3-01 to 3-05 | |
| Flag Location Method: | Site Sketch ☒ | GPS (sub-meter) located ☒ |

**WETLAND HYDROLOGY:**

**NONTIDAL ☒**

| | | |
|---|---|---|
| Intermittently Flooded ☐ | Artificially Flooded ☐ | Permanently Flooded ☐ |
| Semipermanently Flooded ☐ | Seasonally Flooded ☐ | Temporarily Flooded ☐ |
| Permanently Saturated ☐ | Seasonally Saturated/seepage ☒ | Seasonally Saturated/perched ☐ |
| Comments: Wetland 3 consists of a seasonally saturated depressional area at the base of a hillslope. | | |

**TIDAL ☐**

| | | |
|---|---|---|
| Subtidal ☐ | Regularly Flooded ☐ | Irregularly Flooded ☐ |
| Irregularly Flooded ☐ | | |
| Comments: None | | |

**WETLAND TYPE:**

**SYSTEM:**

| | | |
|---|---|---|
| Estuarine ☐ | Riverine ☐ | Palustrine ☒ |
| Lacustrine ☐ | Marine ☐ | |
| Comments: None | | |

**CLASS:**

| | | |
|---|---|---|
| Emergent ☐ | Scrub-shrub ☐ | Forested ☒ |
| Open Water ☐ | Disturbed ☐ | Wet Meadow ☐ |
| Comments: Wetland 3 is characterized by a closed canopy hardwood forest dominated by red maple. | | |

**WATERCOURSE TYPE:**

| | | |
|---|---|---|
| Perennial ☐ | Intermittent ☐ | Tidal ☐ |
| Watercourse Name: None | | |
| Comments: None | | |

## Wetland Delineation Field Form (Cont.)

**SPECIAL AQUATIC HABITAT:**

| | |
|---|---|
| Vernal Pool Yes ☐ No ☒ Potential ☐ | Other ☐ |
| Vernal Pool Habitat Type: None | |
| Comments: None | |

**SOILS:**

| | | |
|---|---|---|
| Are field identified soils consistent with NRCS mapped soils? | Yes ☒ | No ☐ |

**DOMINANT PLANTS:**

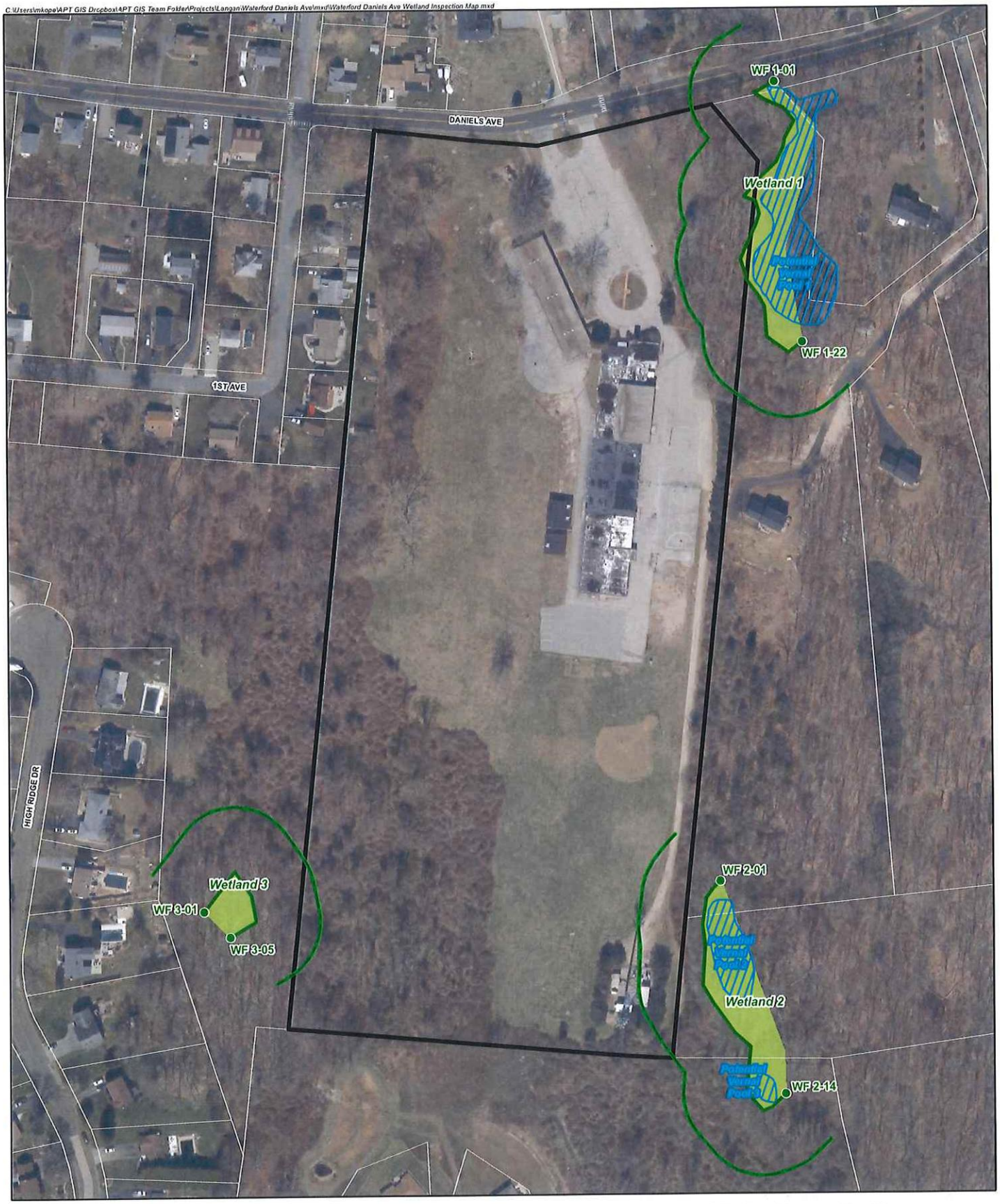
| | |
|---|---|
| Red Maple (Acer rubrum) | Spicebush (Lindera benzoin) |
| Multiflora Rose* (Rosa multiflora) | Highbush Blueberry (Vaccinium corymbosum) |
| Poison Ivy (Toxicodendron radicans) | |

* denotes Connecticut Invasive Species Council invasive plant species

**GENERAL COMMENTS:**

Wetland 3 is located off the southwest corner of the Site on the adjacent property. This wetland feature is located at the base of a hillslope within a depressional area with a distinct slope break and rocky poorly drained soils. This isolated feature is dominated by red maple with spicebush and highbush blueberry within the understory. Small areas of shallow seasonal flooding were observed within the depression, which are unlikely support vernal pool breeding habitat due to their apparent shallow flooding and anticipate short-duration hydroperiod.

C:\Users\mkopel\APT GIS Dropbox\APT GIS Team Folder\Projects\Langan\Waterford Daniels Ave\mxd\Waterford Daniels Ave Wetland Inspection Map.mxd




**Legend**

- Site
- Wetland Flag
- 100' Upland Review Area
- Delineated Wetland Boundary
- Approximate Wetland Area
- Approximate Parcel Boundary

**Wetland Inspection Map**

51 Daniels Avenue
Waterford, Connecticut

N

200 100 0 200 Feet

*Map Notes:*
*Base Map Source: 2019 CT Aerial Imagery (CTECO)*
*Map Scale: 1 inch = 200 feet*
*Map Date: September 2024*

LANGAN
ALL-POINTS TECHNOLOGY CORPORATION

# Wetland and Vernal Pool Protection Program

## ENVIRONMENTAL NOTES - RESOURCES PROTECTION PROGRAM

## WETLAND AND VERNAL POOL PROTECTION MEASURES

As a result of the project's location in the vicinity of sensitive habitats including wetland resources and vernal pool habitat, the following Protection Program shall be implemented by the Contractor to avoid unintentional impacts to proximate wetland and vernal pool resources during construction activities. Details of protection measures to be implemented in association with construction and maintenance of the facility are provided below.

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. The protection measures shall be implemented and maintained throughout the duration of construction activities until permanent stabilization of site soils has occurred.

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 wetlands prior to the start of construction activities. The Contractor shall contact Dean Gustafson, Senior Wetland Scientist at APT, at least 5 business days prior to the pre-construction meeting. Mr. Gustafson can be reached by phone at (860) 552-2033 or via email at dgustafson@allpointstech.com.

This resources protection program consists of several components including: education of all contractors and sub-contractors prior to initiation of work on the site; installation of erosion controls; petroleum materials storage and spill prevention; protective measures; wetland and vernal pool protection measures; herbicide, pesticide, and salt restrictions; and reporting.

1. **Contractor Education:**

    a. Prior to work on site, the Contractor shall attend an educational session at the pre-construction meeting with APT. This orientation and educational session will consist of an introductory meeting with APT to emphasize the environmentally sensitive nature of the project, the various wetland and vernal pool resources, and the requirement to diligently follow the Protective Measures as described in sections below. Workers will also be provided information regarding the identification of turtles, snakes, and common herpetofauna that could be 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 following sections.

    b. The Town of Waterford Environmental Planner will be notified a minimum of 72 hours in advance of the pre-construction meeting with an invitation to attend.

    c. The Contractor will designate a member of its crew as the Project Monitor to be responsible for the periodic "sweeps" for turtles and other 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.

d. The Contractor's Project Monitor will be provided with cell phone and email contacts for APT personnel. Educational poster materials will be provided by APT and displayed on the job site to maintain worker awareness as the project progresses.

e. 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.

f. If any rare species are encountered, the Contractor shall immediately cease all work, avoid any disturbance to the species, and contact APT.

2. **Erosion and Sedimentation Controls/Isolation Barriers**

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. Exclusionary fencing shall be at least 20 inches tall and must be secured to and remain in contact with the ground and be regularly maintained by the contractor (at least bi-weekly and after major weather events) to secure any gaps or openings at ground level that may let animal pass through.

c. The extent of the erosion controls will be as shown on the site plans. The Contractor shall have additional sedimentation and erosion controls stockpiled on site should field or construction conditions warrant extending devices. In addition to the Contractor making these determinations, requests for additional controls will also be at the discretion of the Environmental Monitor.

d. Installation of sedimentation and erosion controls, required for erosion control compliance and creation of a barrier to possible migrating/dispersing turtles, shall be performed by the Contractor following clearing activities and prior to any earthwork. The Environmental Monitor will inspect the work zone area prior to and following erosion control barrier installation to ensure the area is free of amphibians and reptiles and document barriers have been satisfactorily installed. The intent of the barrier is to segregate the majority of the work zone and isolate it from nesting/foraging/migrating/dispersing turtles, snakes and other herpetofauna. Oftentimes complete isolation of a work zone is not feasible due to accessibility needs and locations of staging/material storage areas, etc. Although the barriers may not completely isolate the work zone, they will be positioned to deflect

migrating/dispersal routes away from the work zone to minimize potential encounters with turtles, snakes and other herpetofauna.

e. The Contractor shall be responsible for daily inspections of the sedimentation and erosion controls for tears or breaches and accumulation levels of sediment, particularly following storm events that generate a discharge, as defined by and in accordance with applicable local, state and federal regulations. The Contractor shall notify the APT Environmental Monitor within 24 hours of any breaches of the sedimentation and erosion controls and any sediment releases beyond the perimeter controls that impact wetlands, watercourses, or areas within 100 feet of wetlands. The APT Environmental Monitor will provide periodic inspections of the sedimentation and erosion controls throughout the duration of construction activities only as it pertains to their function to protect nearby wetlands. Such inspections will generally occur once per month. The frequency of monitoring may increase depending upon site conditions, level of construction activities in proximity to sensitive receptors, or at the request of regulatory agencies. If the Environmental Monitor is notified by the Contractor of a sediment release, an inspection will be scheduled specifically to investigate and evaluate possible impacts to wetland resources.

f. Third party monitoring of sedimentation and erosion controls will be performed by other parties, as necessary, under applicable local, state and/or federal regulations and permit conditions.

g. No equipment, vehicles or construction materials shall be stored within 100 feet of wetland or watercourse resources.

h. All silt fencing and other erosion control devices shall be removed within 30 days of completion of work and permanent stabilization of site soils. If fiber rolls/wattles, straw bales, or other natural material erosion control products are used, such devices will not be left in place to biodegrade and shall be promptly removed after soils are stable so as not to create a barrier to wildlife movement. Seed from seeding of soils should not spread over fiber rolls/wattles as it makes them harder to remove once soils are stabilized by vegetation.

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. If a Spill Prevention Control and Countermeasure (SPCC) Plan for this project, per the requirements of 40 CFR 112, has been developed for this facility, please refer to the SPCC for specific requirements. Basic requirements for petroleum materials storage and spill prevention are provided below. In the event these basic requirements contradict the SPCC, the Contractor shall rely on requirements provided in the SPCC.

c. 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.

d. The service of machinery shall not occur within 100 feet of wetlands or watercourses.

e. At a minimum, 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 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.

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 wetlands and vernal pool.
   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 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 local, state and federal agencies, as necessary, including the Town of Waterford.

4. **Wetland and Vernal Pool Protective Measures**

a. A thorough cover search of the construction area will be performed by APT's Environmental Monitor prior to and following installation of the silt fencing barrier to remove any wildlife from the work zone prior to the initiation of any vegetation removal and construction activities. Any wildlife 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, generally on a monthly basis.

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 "decoy pools" that could intercept amphibians potentially moving through the project area. 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 wildlife movements.

5. **Reporting**

a. A Compliance Monitoring Report (brief narrative and applicable photos) documenting each APT inspection will be submitted by APT to the Permittee and its Contractor for compliance verification of these protection measures. These reports are not to be used to document compliance with any other permit agency approval conditions (i.e., CTDEEP Stormwater Permit monitoring, etc.). Any non-compliance observations of erosion control measures or evidence of erosion or sediment release will be immediately reported to the Permittee and its Contractor and included in the reports. Any observations of rare species, resource impacts, or corrective actions will be included in the reports.

a. Following completion of the construction project, APT will provide a final Compliance Monitoring Report to the Permittee documenting implementation of this wetland and vernal pool protection program and monitoring observations. The Permittee is responsible for providing a copy of the final Compliance Monitoring Report to the Town of Waterford Environmental Planner for compliance verification.

b. Any observations of rare species will be reported to CTDEEP NDDB by APT on the appropriate reporting form, with photo-documentation (if possible) and specific information on the location and disposition of the animal.

# Photo Documentation

Photo 1: Overview of Wetland 1 looking southeast.

Photo 2: View of southern portion of Wetland 1 looking south at potential vernal pool.

Photo 3: View of Wetland 1's southern vernal pool habitat looking south.

Photo 4: View of wood frog egg masses in Vernal Pool 1.

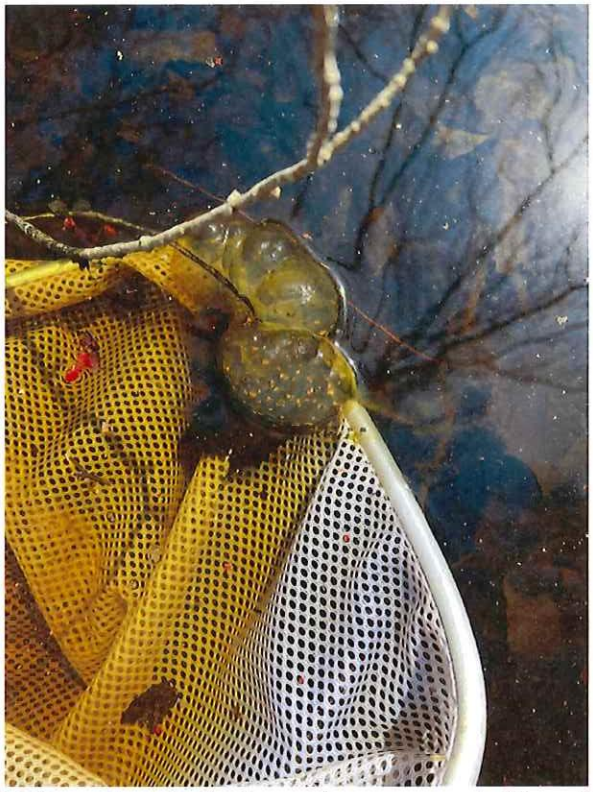


Photo 5: View of spotted salamander egg mass in Vernal Pool 1.

Photo 6: View of wetland and vernal pool upland enhancement area looking east; Wetland 1 and Vernal Pool 1 in background in forested area.