

**DETERMINATION OF NO REGULATED ACTIVITY OR, IN THE  
ALTERNATIVE, REQUEST TO CONDUCT REGULATED  
ACTIVITIES ASSOCIATED WITH A PROPOSED NEW PUBLIC  
SCHOOL LOCATED AT 51 DANIELS AVENUE**

**MAY 1, 2025**

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5. Plan sheet CS101-CS102 showing proposed activities and upland review area, photo reduced to 11" x 17"
6. Wetland Assessment Map, prepared by All-Points Technology Corp., dated September 2024
7. Environmental Assessment Report (excerpt), prepared by All-Points Technology Corp., dated May 1, 2025
8. Stormwater Management Report (excerpt), prepared by Langan, dated May 1, 2024
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10. Notification letter to Waterford Utilities Commission/Water Company

## SUBMITTED UNDER SEPARATE COVER

Application Fee

Full-Size Plan Sets

Stormwater Management Report, prepared by Langan, dated May 1, 2025.

Environmental Assessment Report, prepared by All-Points Technology Corp., dated May 1, 2025



# TAB 1



Matt Ranelli  
Phone: (203) 836-2805  
MRanelli@goodwin.com

265 Church Street  
Suite 1207  
New Haven, CT 06510

May 1, 2024

Richard Muckle, Chair and Commission Members  
Waterford Conservation Commission  
15 Rope Ferry Road  
Waterford, CT 06385

Maureen FitzGerald  
Environmental Planner  
15 Rope Ferry Road  
Waterford, CT 06385

Re: Request For Determination Of No Regulated Activities Or, In The Alternative,  
Request For Approval To Conduct Regulated Activities Associated With A  
Proposed New School Facility; 51 Daniels Avenue, Waterford CT

Dear Chair Muckle and Commission Members:

On behalf of our client, LEARN Regional Education Service Center ("LEARN"), we are pleased to submit to the Conservation Commission the enclosed request for determination of no regulated activities or on the alternative application for approval to conduct regulated activities associated with the redevelopment of the existing Southwest School property into a new public, magnet elementary school and daycare facility.

As discussed in greater detail below, the proposed plan for the new school building does not involve any direct wetland or watercourse activities and no activities in the 100-foot upland review area that will adversely impact the wetland resources. There are no on-site wetlands however the 100-foot upland review area of three off-site wetlands extends onto the existing site. As part of the proposed school project there will be a small portion of a sidewalk located approximately 90 feet from the wetlands. That very limited disturbance is upland from an existing access road to the cell tower located on site and will not have any adverse impact on the wetlands as confirmed by in the attached wetland report.

#### The Proposed Project

LEARN is a Connecticut regional educational service center<sup>1</sup> that provides educational resources, programs and services to help meet the needs of the towns it service, including Waterford. The Town of Waterford has agreed to sell a portion of the former Southwest School site at 51 Daniel Avenue to LEARN for the purpose of constructing new school facility which is the subject of this application. The Town of Waterford will also retain a portion of the 51

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<sup>1</sup> Regional educational service centers were authorized by state statute starting in 1972 and based on voluntary partnerships with local towns and schools. LEARN serves Waterford and parts of other nearby towns.

Danials Avenue site to be merged with adjacent Town-owned open space land and in part for recreational use to construct two new pickleball courts – which are the subject of a separate wetland application filed simultaneously with this application and pending before the Commission.<sup>2</sup> The areas to be sold to LEARN and the areas to be retained by the Town are shown on plan sheet CS100 (attached at Tab 4).

LEARN is proposing to replace the existing Southwest School building with a new combine magnet elementary school and daycare center. The new elementary school building be an upgrade over the existing building by meeting all the current building, life safety, efficiency and accessibility codes. In addition, the proposed plan includes replacing the existing conditions with a modern stormwater management system that satisfies Waterford's stormwater ordinances and the state guidance documents. The entire building, parking lot and stormwater management system is located outside the 100-foot upland review area for the two off-site wetlands and will have no adverse impacts (and will improve conditions compared to the existing facility). The proposed school facility layout and stormwater design is shown on plan sheets CS101 and CS102 (attached at Tab 5).

### The Off-Site Wetlands

LEARN retained a leading wetland expert, Dean Gustafson of All-Points Technology Corp., with statewide and local experience to evaluate the site and the off-site wetlands and advise LEARN with regard to avoiding wetland impacts. See attached report (Tab 6).

All-Points identified and evaluated three off-site wetlands as shown on the wetland inspection map at Tab 6. Wetland 1 is the largest of the three wetlands and is located to the northeast of the site and abutting Daniels Avenue. It is a mostly wooded wetland dominated by red maple and black gum trees. Wetland 1 contains an imbedded vernal pool that provides breeding habitat for wood frogs and spotted salamanders. Wetland 2 is located off the southeast corner of the site. It is a smaller wetland dominated by red maple trees and multiflora rose and green briar understory. Wetland 2 has been historically altered by the presence of a stonewall that alters the natural drainage. Wetland 3 is located off the southwest corner of the site (toward High Street) on a sloped hillside with rocky soils. Like the other wetlands, the canopy is dominated by red maple trees.

As detailed in All-Point's report, there are no proposed activities located in the wetlands or in the 100 foot upland review area with the small exception of a portion of the sidewalk approximately 90 feet away from Wetland 2. All of All-Points' recommendations to safeguard the associated wetland are accepted and/or incorporated into the application. All-Point evaluation and report concludes that there will not be any adverse impact to the off-site wetland or vernal pool from the proposed activities.

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<sup>2</sup> As filed, neither of LEARN's two wetland applications warrant a public hearing under the Commission's regulations. However, if the Commission determines that a public hearing is needed for one application but not the other, LEARN respectfully request that the Commission not delay action on the application that does not require a hearing. If the Commission determines that a hearing is required for both applications, LEARN consents to the Commission conducting those hearing simultaneously, if it so chooses, provided it still votes on each application separately.

### Stormwater Management

As detailed in the LEARN's stormwater report prepared by, Langan, (attached at Tab 8) the proposed stormwater management system is an improvement over existing condition. The new system will provide better stormwater treatment and management that controls and reduces the peak runoff rate and total volume across all storm events up to and including the 100-year storm. The system meets all of the requirements contained in the Waterford Stormwater Ordinance and is consistent with the updated 2024 state Stormwater Quality Manual guidance document.

### No Regulated Activities

As noted above, LEARN is not proposing any regulated activities for the school project. There are no direct wetland or watercourse activities located in the three off-site wetlands. There are no proposed activities in the 100-foot upland review area for Wetlands 1 or 3 and only a small portion off a proposed sidewalk skirts the very edge of the upland review area for Wetland 2. That portion of the sidewalk is located upland from the existing cell tower access road approved by this Commission in 2012 and it will not have any adverse impact on Wetland 2. As detailed in the report of LEARN's wetland expert, the proposed sidewalk area will not adversely impact the associated, off-site wetlands.

LEARN did evaluate eliminating the proposed portion of the sidewalk but determined that doing so would not have less impact on the wetland and would frustrate LEARN's purpose of providing a safe walking area for student, families and faculty.

### Conclusion

Based on the above, LEARN respectfully requests that the Commission find that there are no regulated activities associated with the proposed school. In the alternative, to the extent the Commission determines that a potential adverse impact exists, we request that the Commission approve such activity on the basis that LEARN has minimized or avoided adverse impact to the wetlands and that that no feasible and prudent alternative with less impact exist.

We have included an application of \$160, if a different fee is due please let us know and we will pay it promptly. We look forward to the opportunity to present LEARN's application to you at the Commission next meeting. Thank you for consideration.

Sincerely,

*Matthew Ranelli*  
Matthew Ranelli

Enclosures



# TAB 2

**TOWN OF WATERFORD**  
**Application for Inland Wetland / Watercourse Permit**

**Type of Application:**

Permitted Use, Section 4.1 \_\_\_\_\_  
 Unregulated Activities, Section 4.2 ☒  
 Regulated Activities, Section 6 \_\_\_\_\_

Fee: \_\_\_\_\_

**Agency Use:**

Date Received: \_\_\_\_\_  
 Received By: \_\_\_\_\_  
 Application Number: \_\_\_\_\_

|                                                                                                                                                                                                                                                                                                                                    |                                         |                                                     |                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------------------|------------------------|
| <b>1. Applicant:</b> LEARN Regional Education Service Center                                                                                                                                                                                                                                                                       |                                         | <b>Phone:</b> 860 434 4800 x1345                    |                        |
| <b>Address:</b> 44 Hatchetts Hill Road, Old Lyme                                                                                                                                                                                                                                                                                   |                                         | <b>State:</b> CT                                    | <b>Zip:</b> 06371      |
| <b>Fax:</b>                                                                                                                                                                                                                                                                                                                        | <b>E-Mail:</b> kericson@learn.k12.ct.us |                                                     |                        |
| <b>2. Owner:</b> Town of Waterford                                                                                                                                                                                                                                                                                                 |                                         | <b>Phone:</b>                                       |                        |
| <b>Address:</b> 15 Rope Ferry Road, Waterford                                                                                                                                                                                                                                                                                      |                                         | <b>State:</b> CT                                    | <b>Zip:</b> 06385      |
| <b>Fax:</b>                                                                                                                                                                                                                                                                                                                        | <b>E-Mail:</b>                          |                                                     |                        |
| <b>3. Agent:</b> Shipman & Goodwin LLP Attn: Matt Ranelli                                                                                                                                                                                                                                                                          |                                         | <b>Phone:</b> 860 251 5748                          |                        |
| <b>Address:</b> One Constitution Plaza, Hartford CT                                                                                                                                                                                                                                                                                |                                         | <b>State:</b> CT                                    | <b>Zip:</b> 06103-1919 |
| <b>Fax:</b>                                                                                                                                                                                                                                                                                                                        | <b>E-Mail:</b> mranelli@goodwin.com     |                                                     |                        |
| <b>4. Property Address:</b> 51 Daniels Avenue                                                                                                                                                                                                                                                                                      |                                         |                                                     |                        |
| <b>5. Abutting Property Owners – Complete Attached Form</b>                                                                                                                                                                                                                                                                        |                                         |                                                     |                        |
| <b>6. Activity to be Reviewed and / or Licensed (attach sheet if necessary):</b>                                                                                                                                                                                                                                                   |                                         |                                                     |                        |
| No direct wetland activities or disturbance. Very small area of sidewalk and grading in a portion of the 100-foot upland review area. No adverse impacts to the wetland resource.                                                                                                                                                  |                                         |                                                     |                        |
| <b>7. Description of Proposed Activity (attach sheet if necessary):</b>                                                                                                                                                                                                                                                            |                                         |                                                     |                        |
| Construction activities related to a new school building located outside the upland review area. A small portion of the proposed sidewalk is located in the outer edge of the upland review area but will not adversely impact the wetland                                                                                         |                                         |                                                     |                        |
| <b>8. Purpose of Activity (attach sheet if necessary):</b> Public regional magnet school and daycare facility                                                                                                                                                                                                                      |                                         |                                                     |                        |
| <b>9a. Acreage of Property:</b> Appox. 15.3 acres                                                                                                                                                                                                                                                                                  |                                         | <b>9b. Acreage of Wetlands:</b> No on-site wetlands |                        |
| <b>10. Acreage of Wetlands Altered:</b> 0                                                                                                                                                                                                                                                                                          |                                         |                                                     |                        |
| <b>11. Wetland Mitigation Proposed:</b> Yes. See attached reports regarding soil and erosion control, stormwater management and wetlands                                                                                                                                                                                           |                                         |                                                     |                        |
| <b>12. Section 7 and sections 8.1 &amp; 8.2 of the Town of Waterford "Inland Wetlands and Watercourse Regulations" have been complied with: (Review attached check list)</b>                                                                                                                                                       |                                         |                                                     |                        |
|                                                                                                                                                                                                                                                                                                                                    |                                         | <b>Yes:</b> <input checked="" type="checkbox"/>     | <b>No:</b>             |
| The applicant / owner hereby gives the Commission, its agent and consultants the right of free access to any part of the property under consideration. The undersigned warrants the truth of all statements contained herein and in all supporting documents according to the best of his / her knowledge, information and belief. |                                         |                                                     |                        |
| <b>Applicant:</b> Katherine Ericson                                                                                                                                                                                                                                                                                                |                                         | <b>Date:</b> 5/1/2025                               |                        |
| <b>Owner:</b> Robert Dink                                                                                                                                                                                                                                                                                                          |                                         | <b>Date:</b> 4/22/2025                              |                        |
| <b>Agent:</b>                                                                                                                                                                                                                                                                                                                      |                                         | <b>Date:</b> 5/1/25                                 |                        |

**Conservation Commission  
Permit Application Attachment**

**Properties Adjacent to:**

| Owner                                                     | Parcel ID# | Property Address                           | Mailing Address                            |
|-----------------------------------------------------------|------------|--------------------------------------------|--------------------------------------------|
| APARICIO VIRGILIO M & CARLA                               | 153200     | 50 DANIELS AVENUE<br>WATERFORD, CT 06385   | 50 DANIELS AVE<br>WATERFORD, CT 06385      |
| GUIDO MARK A & PAULA A                                    | 305300     | 9 HIGH STREET<br>WATERFORD, CT 06385       | 9 HIGH STREET<br>WATERFORD, CT 06385       |
| HUGHES SEAN P + PEREIRA ALYSSA B                          | 153100     | 48 DANIELS AVENUE<br>WATERFORD, CT 06385   | 48 DANIELS AVENUE<br>WATERFORD, CT 06385   |
| KELLERSTEDT ROY & CYNTHIA L                               | 153500     | 54 DANIELS AVENUE<br>WATERFORD, CT 06385   | 54 DANIELS AVENUE<br>WATERFORD, CT 06385   |
| LATHROP TODD R & VICKIE L                                 | 305200     | 7 HIGH STREET<br>WATERFORD, CT 06385       | 7 HIGH STREET<br>WATERFORD, CT 06385       |
| MAHEU SPENCER & KIRDZIK MELISSA                           | 153920     | 63 DANIELS AVENUE<br>WATERFORD, CT 06385   | 63 DANIELS AVENUE<br>WATERFORD, CT 06385   |
| OPEN SPACE                                                | 153950     | 63R DANIELS AVENUE<br>WATERFORD, CT 06385  |                                            |
| OPEN SPACE & MACKENZIE FARM<br>HOMEOWNERS ASSOCIATION INC | 662299     | 21 SEA VIEW TERRACE<br>WATERFORD, CT 06385 | 21 SEA VIEW TERRACE<br>WATERFORD, CT 06385 |
| PARIS JASON                                               | 154300     | 52A DANIELS AVENUE<br>WATERFORD, CT 06385  | PO BOX 919<br>WATERFORD, CT 06385          |



|                                     |        |  |                                            |                                            |
|-------------------------------------|--------|--|--------------------------------------------|--------------------------------------------|
| PARIS JASON M                       | 153400 |  | 52 DANIELS AVENUE<br>WATERFORD, CT 06385   | PO BOX 919<br>WATERFORD, CT 06385          |
| PERKINS BARBARA & MORANGE<br>KELCEY | 153600 |  | 56 DANIELS AVENUE<br>WATERFORD, CT 06385   | 56 DANIELS AVENUE<br>WATERFORD, CT 06385   |
| SAPIA MELISSA J & JOHN              | 305100 |  | 5 HIGH STREET<br>WATERFORD, CT 06385       | 5 HIGH STREET<br>WATERFORD, CT 06385       |
| SGANDURRA JAMES J                   | 305700 |  | 15 HIGH STREET<br>WATERFORD, CT 06385      | 11 HIGH STREET<br>WATERFORD, CT 06385      |
| SGANDURRA JAMES J                   | 305500 |  | 11 HIGH STREET<br>WATERFORD, CT 06385      | 11 HIGH STREET<br>WATERFORD, CT 06385      |
| WATERFORD TOWN OF                   | 153300 |  | 51 DANIELS AVENUE<br>WATERFORD, CT 06385   | 15 ROPE FERRY ROAD<br>WATERFORD, CT 06385  |
| WATERFORD TOWN OF                   | 304500 |  | 33 HIGH RIDGE DRIVE<br>WATERFORD, CT 06385 | 15 ROPE FERRY DRIVE<br>WATERFORD, CT 06385 |



## 51 Daniel Ave Adjacent

4/16/2025 12:59:55 PM

Scale: 1"=376'

Scale is approximate

The information depicted on this map is for planning purposes only.  
It is not adequate for legal boundary definition, regulatory  
interpretation, or parcel-level analyses.



# **TAB 3**





## Statewide Inland Wetlands & Watercourses Activity Reporting Form

*Please complete this form in accordance with the instructions on pages 2 and 3 and mail to:*

*DEEP Land & Water Resources Division, Inland Wetlands Management Program, 79 Elm Street, 3<sup>rd</sup> Floor, Hartford, CT 06106*

*Incomplete or incomprehensible forms will be mailed back to the inland wetlands agency.*

### PART I: Must Be Completed By The Inland Wetlands Agency

1. DATE ACTION WAS TAKEN: year: \_\_\_\_\_ month: \_\_\_\_\_

2. ACTION TAKEN (see instructions - one code only): \_\_\_\_\_

3. WAS A PUBLIC HEARING HELD (check one)? yes ☐ no ☐

4. NAME OF AGENCY OFFICIAL VERIFYING AND COMPLETING THIS FORM:

(print name) \_\_\_\_\_ (signature) \_\_\_\_\_

### PART II: To Be Completed By The Inland Wetlands Agency Or The Applicant

5. TOWN IN WHICH THE ACTIVITY IS OCCURRING (print name): Town of Waterford

does this project cross municipal boundaries (check one)? yes ☐ no ☒

if yes, list the other town(s) in which the activity is occurring (print name(s)): \_\_\_\_\_

6. LOCATION (see instructions for information): USGS quad name: Niantic or number: 101

subregional drainage basin number: 2204

7. NAME OF APPLICANT, VIOLATOR OR PETITIONER (print name): LEARN Regional Education Service Center

8. NAME & ADDRESS OF ACTIVITY / PROJECT SITE (print information): 51 Daniels Avenue

briefly describe the action/project/activity (check and print information): temporary ☐ permanent ☒ description: \_\_\_\_\_

Public school facility with no wetland activities or disturbance

9. ACTIVITY PURPOSE CODE (see instructions - one code only): P

10. ACTIVITY TYPE CODE(S) (see instructions for codes): 12, 14, \_\_\_\_\_

11. WETLAND / WATERCOURSE AREA ALTERED (see instructions for explanation, must provide acres or linear feet):

wetlands: 0 acres open water body: 0 acres stream: 0 linear feet

12. UPLAND AREA ALTERED (must provide acres): <0.1 acres

13. AREA OF WETLANDS / WATERCOURSES RESTORED, ENHANCED OR CREATED (must provide acres): 0 acres

DATE RECEIVED:

### PART III: To Be Completed By The DEEP

DATE RETURNED TO DEEP:

FORM COMPLETED: YES NO

FORM CORRECTED / COMPLETED: YES NO

# **TAB 4**



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- C



Date: 4/30/2025 Time: 3:58 ser: twilley Style Table: Langan.stb Layout: CS100 Document Code: 140310301-0504-CS101-010

CLIENT

ARCHITECTURAL CONSULTANT &amp; LANDSCAPE ARCHITECTS

**RDg.**  
NEWS & DESIGN

CIVIL &amp; GEOTECH ENGINEER

**STRUCTURAL ENGINEER**

MEPFP ENGINEER

ACoustical Engineer

TECH SEAF

61-25411-100-10010111-2

(978) 369-8978

Continued on p. 10

| NO | DATE | DESCRIPTION |
|----|------|-------------|
|----|------|-------------|

850-623-1115

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[illegible]

20240069

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|      |            |
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| DATE | CHECKED BY |
|------|------------|

CS100

CS100

# **TAB 5**

$$1'' = 250'$$


CS102

100' UPLAND REVIEW AREA

MATCHLINE - CS101

MATCHLINE - CS102

**NEWMAN ARCHITECTS, PC**  
265 Church Street, 15th Floor  
New Haven, CT 06510  
203.772.1990 Fax 203.772.1997  
[www.newmanarchitects.com](http://www.newmanarchitects.com)

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NOT FOR  
CONSTRUCTION

**CLIENT**

LEARN  
44 HATCHETTS HILL ROAD  
OLD LYME, CT 06371  
860-434-4800

**ARCHITECTURAL CONSULTANT & LANDSCAPE**  
RDG PLANNING & DESIGN  
1302 HOWARD STREET  
OMAHA, NE 68102  
T 402.392.0133

**RDg...**  
PLANNING & DESIGN

CIVIL &amp; GEOTECH ENGINEER

**LANGAN ENGINEERING & ENVIRONMENTAL SERVICES**  
555 LONG WHARF DRIVE, 9TH FLOOR  
NEW HAVEN, CT 06511  
(203) 562-5771

**STRUCTURAL ENGINEER**

**E2 ENGINEERS**  
488 MONTAUK AVE.  
NEW LONDON, CT 06320  
860-437-3259

**MEPFP ENGINEER**  
**CES**

811 MIDDLE STREET  
MIDDLETOWN, CT 06457  
860-632-1682

**ACOUSTICAL ENGINEER**  
**JAFFE HOLDEN**  
 114A WASHINGTON ST. SUITE 2  
 NORWALK, CT 06854  
 (203) 838-4167

**TECH FF&E**  
D'AGOSTINO & ASSOCIATES  
477 MAIN ST  
MONROE, CT 06468  
(203) 497-3064

**SUSTAINABILITY CONSULTANT**  
THE GREEN ENGINEER  
23 BRADFORD  
CONCORD, MA 01742  
(978) 369-8978

PHASE  
WATERFORD CONSERVATION  
SUBMISSION

## REVISIONS

[illegible]

PROJECT NAME

## LEARN - EARLY CHILDHOOD SCHOOL

**PROJECT ADDRESS:**  
**51 DANIELS AVE,**  
**WATERFORD, CT 06385**

STATE PROJECT NUMBER  
**245-0090 MAG/N/PF**

NEWMAN PROJECT NUMBER  
**20240069**

DRAWING TITLE

### SITE PLAN I

SCALE  
As indicated

|            |            |
|------------|------------|
| DATE:      | CHECKED BY |
| 05/01/2025 | KEG        |

|                |     |
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| 05/01/2025     | REG |
| DRAWING NUMBER |     |

CS101









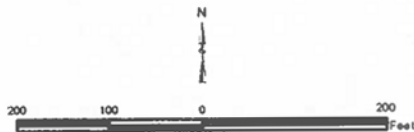
**TAB 6**



**Legend**

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

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



**Wetland Inspection Map**  
51 Daniels Avenue  
Waterford, Connecticut

# **TAB 7**





## 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

Re: LEARN - Early Childhood School  
51 Daniels Avenue, Waterford, Connecticut  
APT Job No: CT3611350

Dear Ms. Gagnon,

All-Points Technology Corporation, P.C. ("APT") understands that LEARN - Early Childhood School is acquiring  $\pm 15.36$  acres of a  $\pm 19.32$ -acre parcel at 51 Daniels Avenue in Waterford, Connecticut to be utilized for a proposed elementary school which will include demolition of the existing buildings, reconfiguration to existing drive aisles and parking areas, along with upgrades to the stormwater infrastructure (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"). The remaining  $\pm 3.96$  acres will be retained by the Town of Waterford for development of pickleball courts and a parking area, details of which will be submitted under a separate application. This document provides an assessment of three (3) wetlands and an embedded vernal pool proximate to the Project, which includes a description of the functions and values of the wetlands 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  $\pm 19.32$ -acre area on the south side of Daniels Avenue currently developed with a school building, associated impervious parking, drive aisles and pervious areas within the north eastern half of the rectangular-shaped parcel. A telecommunications tower facility is also located in the southeastern corner of the property and partially within the upland review area of Wetland 2 as discussed below. Remaining undeveloped portions of the property consist of an athletic field, open grassy and wooded/scrub-shrub areas. Wetlands were identified in proximity to the property along the northeastern, southeastern and southwestern boundaries. Within the northeastern wetland complex, Wetland 1, in proximity to Daniels Avenue, vernal pool habitat was identified and confirmed during the spring 2025 breeding season. Stormwater runoff from the school building and parking areas generally run overland to the west and toward Daniels Avenue to the north and not toward Wetland 1.

**ALL-POINTS TECHNOLOGY CORPORATION, P.C.**

567 VAUXHALL STREET EXTENSION · SUITE 311 · WATERFORD, CT 06385 · PHONE 860-663-1697



## **Wetland and Vernal Pool 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 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.

Three distinct wetland areas were identified on or immediately adjacent to the subject property located along the northeastern property boundary (identified as Wetland 1), off property along the southeastern boundary (Wetland 2) and off property near the southwestern boundary (Wetland 3). The 100-foot upland review area for all three delineated wetlands encroach into the subject property. Imbedded within Wetland 1, obligate vernal pool species breeding was also confirmed during a follow-up investigation performed on April 12, 2025. The limits of inundation associated with the vernal pool habitat were surveyed during the spring 2025 inspection. Although potential vernal pool habitat was identified in Wetland 2 during the October 18, 2024 wetland investigation, no vernal pool habitat was identified during the spring 2025 vernal pool inspection as those suspect areas were either found dry or had less than 2 inches of inundation and no evidence of any amphibian breeding. A detailed description of three wetland and one vernal pool resources identified is provided below.

### **Wetland Descriptions**

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.

Wetland 2 is located off the southeast corner of the subject property on the adjacent parcel. Similar to Wetland 1, saturated edges border interior seasonally flooded areas, although much shallower than Wetland 1. 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 of the identified wetland 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 3 is located off the southwest corner of the subject property 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 were confirmed to not support vernal pool breeding habitat due to their shallow flooding and short-duration hydroperiod.

## 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 and off-Property to the west. 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 dominated by the Udorthents-Urban land complex within existing developed areas associated with the vacant school, Paxton and Montauk fine sandy loam in the western half of the property and Woodbridge fine sandy loam in the undeveloped southeastern portion. 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:

**Paxton and Montauk fine sandy loam (Soil Unit 84)** consist of well drained loamy soils formed in lodgement till landscapes. They are very deep to the underlying bedrock with a moderate depth to a densic contact. They are nearly level to steep soils on hills, drumlins and till plains.

**Woodbridge fine sandy loam (Soil Unit 45)** is a moderately well drained loam soil formed in lodgement till. They are very deep to bedrock and moderately deep to a densic contact. They are nearly level to moderately steep soils with slopes ranging from 0 to 25 percent on hills, drumlins, till plains, and ground moraines.

**Udorthents-Urban Land Complex (Soil Unit 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.

### **Biological Functions:**

The ecological integrity of all three Wetlands have been compromised due to proximity to developed areas, historic alteration of Wetland 2 and the relatively small size of Wetland 3. From a comparative perspective, Wetland 1 has the highest ecological quality: however, fragmented upland habitat buffering this wetland from the existing on-site development, Daniels Avenue to the north and residential properties to the east has diminished some of the wetland's biological functions. 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. Wetland 1 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 of these wetlands has been compromised, wildlife habitat function is supported within Wetland 1 at a Principal level due in part to the vernal pool habitat but not at a significant capacity in Wetlands 2 and 3.

All three wetlands consist 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, these wetlands were assessed as supporting the production export (nutrient) function at a Secondary level based on the fruit bearing shrubs observed in the three resource areas.

### **Hydrologic Functions:**

Wetlands 1, 2 and 3 do not border on a perennial watercourse with an active floodplain, and 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 function is not supported within Wetlands 2 or 3 due to the small size of these features.

All three wetlands receive groundwater discharges from hillside seepage providing the potential for both water discharge and recharge to the local groundwater. Wetland 1 was



assessed as supporting the groundwater discharge/recharge function at a Principal level due to its larger size while Wetlands 2 and 3 support this function at a Secondary level due to their relatively small size.

### **Water Quality:**

The developed surrounding environment provides an opportunity for all three wetlands to support sediment/toxicant/pathogen retention and nutrient removal/retention/transformation functions. Wetland 1 receives stormwater from the subject property through sheet flow. Based on the resource size and location of Wetland 1 there is a potential to support these water quality functions in a Secondary level. Due to the relatively small sizes of Wetlands 2 and 3 there is limited potential to support this function in any significant capacity.

None of the wetlands have the potential for sediment/shoreline stabilization since they do not border on a perennial stream or open water body that would generate high flow velocities during storm events or from 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. Due to their small size and lack of unique characteristics, Wetlands 2 and 3 do not support any of these functions and values in a significant capacity.

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. Wetlands 2 and 3 do not support this value in a significant capacity due to their small size and lack of diverse habitat.

### **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 ("NDDDB"). The nearest NDDDB buffer area is located  $\pm 0.18$  mile to the northeast in nearby Millstone Brook riparian corridor. As such, consultation with DEEP NDDDB is not required for this project. Due to the relatively small forest patch size, limited size of these wetland resources through 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 redevelopment will avoid direct wetland impacts. As previously discussed, Wetland 1 is located mainly off the subject property with the vernal pool habitat located off site and Wetlands 2 and 3 are entirely located off the property. However, due to the proximity of all wetlands to the subject property, the 100-foot URA encroaches on to the property. The proposed redevelopment will avoid encroachment into most of the URA with one exception. A small  $\pm 200$  SF portion of the proposed perimeter sidewalk that will surround the entire LEARN school will just encroach into the URA of Wetland 2 with associated grading and limit of disturbance encompassing an additional  $\pm 800$  SF of the URA; total activity in the URA is  $\pm 1,000$  SF. This relatively small area of regulated activity in the URA is currently comprised of maintained lawn associated with the nearby athletic field. In addition, a gravel access road that provides access to the telecommunications facility (approved by this Commission in 2012) is located between the proposed sidewalk and Wetland 2. Additionally, the redevelopment project avoids any encroachment into areas within 100 feet of the vernal pool in Wetland 1. As a result, the proposed redevelopment will not impact the vernal pool habitat or intercept migratory corridors or forested habitat used by the identified vernal pool species.

The project has been designed to avoid direct stormwater discharges to wetland resource areas while maintaining existing drainage patterns and hydrology inputs to the wetland areas to the maximum extent practicable. The proposed stormwater management system incorporates a variety of stormwater quality measures including catch basins with sumps, ADS Stormtech Isolator Rows, hydrodynamic separators, and belowground and aboveground infiltration basins. These treatment measures will properly control peak runoff rates, retain all of the project's post-development retention volume, and provide proper renovation of the water quality volume, resulting in a significant improvement over the current stormwater management system to the benefit of the receiving wetlands. The proposed stormwater management system substantially achieves the stormwater volume, rate, and average annual pollutant load reduction requirements as per the recommendations of the 2024 *Connecticut Stormwater Quality Manual*.

## **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 LEARN - Early Childhood School redevelopment will avoid any direct impact to wetlands or vernal pool resources.

Areas of proposed activity within Wetland 2's 100-foot URA, which total  $\pm 1,000$  SF, are proposed to occur within an existing maintained open field associated with the nearby athletic field that is routinely mowed. Impacted and degraded areas currently exist in closer proximity to Wetland 2 associated with the telecommunications facility and gravel access drive. 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. However, considering the existing developed and disturbed nature of this particular upland review area, such functions are not being supported in a significant capacity.

Construction and operation of the school would not result in direct physical impact to Vernal Pool 1 or impact within 100 feet of the vernal pool edge. 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 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.

## **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.

### **Mitigation**

Since the proposed addition and renovation activities will not directly impact wetland resources and are limited to activities within the existing developed/disturbed upland review area, no mitigation is considered necessary. APT will perform contractor education training at a pre-construction meeting to review the environmentally sensitive nature of the project area, where wetland and vernal pool resources are located and the need to ensure protection of those resources during construction through implementation and maintenance of the soil erosion and sediment control plan. APT will also posting notice signs to highlight the environmentally sensitive nature of the subject property to maintain diligence by the contractor throughout the construction project duration.



## **Summary and Conclusion**

The LEARN - Early Childhood School redevelopment project will not directly impact wetland or vernal pool resources. In addition, activities proposed in the 100-foot URA will be limited to existing developed and disturbed areas and only encompass a relatively small  $\pm 1,000$  SF area. 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.

Considering the proposed development activities avoid any direct wetland and vernal pool impact, work is limited to the outer URA within an existing degraded and maintained area, and extensive protection measures will be employed during 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](mailto:dgustafson@allpointstech.com).

Sincerely,

All-Points Technology Corporation, P.C.



Dean Gustafson  
Professional Soil Scientist  
Senior Wetland Scientist

Enclosures

# Photo Documentation

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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.



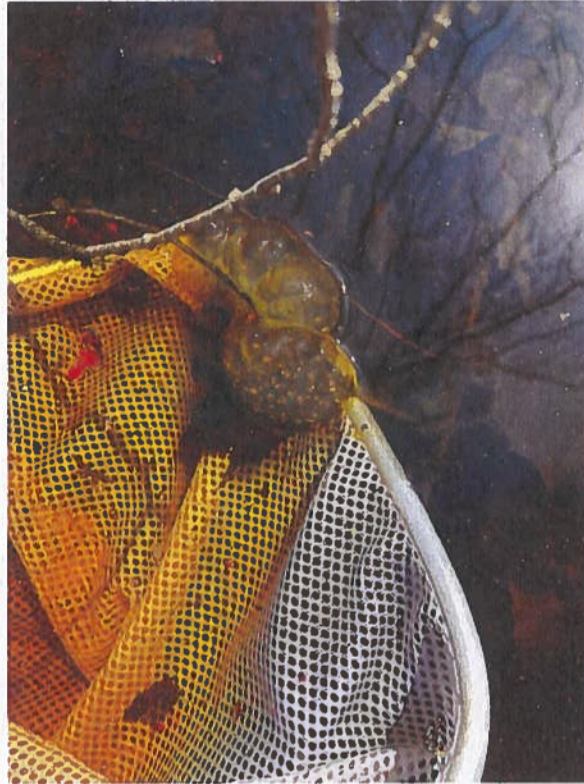


Photo 5: View of spotted salamander egg mass in Vernal Pool 1.



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





Photo 7: View of Wetland 2 looking southeast.



Photo 8: View of Wetland 3 looking west.





Photo 9: View of Wetland 2 Potential Vernal Pool 2 area looking south.  
Area contained less than 2 inches of inundation with no breeding observed.



Photo 10: View of Wetland 2 Potential Vernal Pool 3 area looking south.  
Area void of any inundation with no breeding observed.



## **General Background**

Dean Gustafson has been the lead wetland and soil scientist on more than 1,500 development projects in Connecticut and Western Massachusetts since 1988. His background includes NEPA/CEPA documentation, wetlands, water-quality investigations, coastal-zone-management studies, and natural-resource and ecological evaluations. Mr. Gustafson has expertise in wetland identification, soil mapping, soil classification, vegetative and hydrology surveys, and wetland impact assessment, mitigation design, and mitigation construction oversight. He has extensive experience in local, state, and federal wetland permitting, including having worked on over 150 Connecticut Siting Council dockets and providing expert testimony at Council hearings. Mr. Gustafson has consulted on numerous projects that involve soils-related issues such as erosion and sediment control planning, vegetative soil stabilization and storm water management BMP evaluation and selection. Mr. Gustafson's water quality experience includes stormwater studies for compliance with National Pollution Discharge Elimination System (NPDES), Section 401 Water Quality Certification, and the 2004 Connecticut DEP Stormwater Quality Manual. He has also served as the Environmental Compliance Monitor on numerous construction projects to ensure compliance with wetland, vernal pool, and rare species protections as conditioned by various local, state and federal regulatory agency authorizations.

In addition to wetland consulting, his expertise as a wetland biologist includes the identification of flora and fauna and evaluation of wildlife habitat functions in both wetland and terrestrial systems, including focused avian, mammalian, invertebrate and herpetofauna surveys using both active and passive methods. Mr. Gustafson also performs targeted surveys for sensitive, rare and listed species that have resolved numerous potential rare species conflicts with proposed developments in coordination with state and federal agencies. In addition, Mr. Gustafson has extensive experience in performing herpetological surveys, including vernal pool investigations and evaluations.

## **Representative Projects**

### **Industrial Developments, CT and MA**

Managed wetland and rare species permitting for several large industrial developments for national Fortune 100 tenants in Connecticut and Massachusetts. Services included performing wetland, vernal pool, rare species and terrestrial impact evaluation studies, preparation of assessment documents, and development of mitigation plans. Responsible for preparation of local, state and federal wetland permits and securing agency authorizations. Projects also included conducting extensive rare species surveys, consultation with state wildlife agencies, preparation of conservation and mitigation plans, and securing agency authorizations. Permitted more than 6 million square feet of industrial warehouse space in Connecticut.

### **CT Commercial Solar Projects**

Served as the lead wetland scientist and biologist for the development of numerous commercial-scale solar facilities throughout Connecticut. Project responsibilities included wetland delineation, function and value assessment, wetland mitigation design, federal wetland permit preparation, rare species surveys and consultations with the Connecticut Department of Energy & Environmental Protection Natural Diversity Data Base, vernal pool surveys, project impact evaluations, construction and wetland mitigation monitoring and Siting Council petition support.

### **Siting, Licensing and Permitting Consulting Services – Eversource Energy**

Since 2016, Dean has assisted Eversource Energy in a variety of projects, providing and overseeing: natural resources inventories of existing flora and fauna, habitat evaluations, wetland delineations and impact analyses, vernal pool surveys, rare species surveys, archaeological and cultural investigations, visual analyses, preparation of technical documents (including applications to the Siting Council, municipalities, and state and federal regulatory agencies), and preparation of state and federal

underground utility installations, and existing facilities requiring upgrades. Dean assisted with pre-acquisition due diligence activities; site development feasibility assessments; natural resources inventories of existing flora and fauna; vernal pool studies and assessments; habitat evaluations; wetland delineations, assessments, mitigation designs, and permit compliance monitoring; site layout and design evaluations; erosion and sediment control planning and construction monitoring; vegetative soil stabilization and storm water management BMP evaluations and selection; preparation of technical documents; and, coordination with State and local agencies.

**CPV Towantic Energy Center, Oxford, CT**

Lead scientist responsible for performing wetland investigations, wetland evaluations, wetland mitigation design and rare species surveys for a proposed 785 MW dual-fueled combined cycle electric generating facility. Prepared the federal wetland permit application and secured Section 404 and 401 authorizations from the Army Corps of Engineers New England Division and Connecticut Department of Energy & Environmental Protection, respectively. Also responsible for developing a wetland mitigation plan, which consisted of two constructed stormwater wetland systems to compensate for the project's unavoidable wetland impacts, as well as coordinating regulatory approval for payment into the Audubon CT In Lieu Fee Wetland Mitigation Program. Also provided supporting application materials to the Connecticut Siting Council and expert testimony at numerous hearings.

**National Retailer, Rocky Hill, CT**

Responsible for wetland permitting of a multi-tenant retail development resulting in significant unavoidable wetland impacts and the creation of a wetland mitigation area exceeding 1 acre in size. Wetland permits were secured from the Rocky Hill Wetland Agency, CTDEP and U.S. Army Corps of Engineers for wetland impacts and wetland mitigation area.

**Telecommunications Carrier Wetland Compliance Program**

Project Manager for major telecommunications carrier's wetland compliance program. Responsible for wetland delineation, assessment, mitigation and alternatives analysis, habitat evaluations, vernal pool identification and assessment, design review for permit feasibility, and successful permitting of over 100 wireless telecommunications facilities with local wetland/conservation commissions in the Connecticut, Massachusetts, and Rhode Island market areas including Connecticut Siting Council application and hearing support. Responsible for erosion and sediment control planning and construction monitoring for projects in Connecticut and Massachusetts that represent a potential to impact sensitive wetland and rare species resources during construction.

**Connecticut DOT West Haven/Orange Railroad Station, Environmental Assessment**

Task manager for assessing natural resources, including wetlands, floodplain, aquatic habitats, and wildlife, associated with a proposed railroad station at one of two possible sites. Prepared technical documents in support of Draft Federal Environmental Assessment/Draft State Environmental Impact Evaluation.

**Education**

B.S. University of Massachusetts, Plant and Soil Sciences

Graduate coursework, University of New Hampshire

**Affiliations**

Member, Town of Lebanon, CT Inland Wetlands and Watercourses Commission (since 1995)

**Registrations**

Professional Soil Scientist, Society of Soil Scientists of Southern New England (since 1988)

Connecticut Association of Wetland Scientists

Association of Massachusetts Wetland Scientists

**TAB 8**



01 May 2025

Gary Schneider  
Town of Waterford  
1000 Hartford Turnpike  
Waterford, CT 06385

**RE: Stormwater Management Report  
LEARN Early Childhood School  
Waterford, Connecticut  
Langan Project No.: 140310301**

Dear Mr. Schneider:

This report provides an analysis of the proposed peak runoff discharges and the engineering design for the proposed stormwater conveyance system at 51 Daniels Avenue.

## **PROJECT DESCRIPTION**

### **Existing Conditions**

The project site is located at 51 Daniels Avenue in Waterford, CT; see Figure 1. The existing overall parcel is approximately 19.32 acres. LEARN is acquiring 15.36 acres of the existing parcel to be utilized for a proposed elementary school. The remaining 3.96 acres will be retained by the Town of Waterford. The site is currently occupied by an existing school and includes impervious, grassy, and wooded areas. The parcel is located within the Niantic River subregional drainage basin. The parcel area does not contain any known locations of State and Federal Listed Species and Critical Habitats per the CT Natural Diversity Data Base Areas map of Waterford, CT dated December 2024. To the west, the project site is bordered by residential properties on High Street and High Ridge Drive, to the south by residential properties on Seaview Terrace and the Bayview Healthcare building, and to the east by residential properties and wooded areas. To the north, the project site is bordered by Daniels Avenue. The existing project site is currently a closed school building with associated impervious parking, drive aisles and pervious areas with the majority of stormwater running overland towards off-site wetlands to the west or Daniels Avenue.

Based upon a topographic survey titled "Lot Line Modification Survey" prepared by Benesch, dated March 28, 2024, the site grades generally slope downward from the eastern property line towards High Street and the off-site wetland to the west, with a small northeastern portion of the site sloping downward towards the northeast wetland. Elevations range from approximately 120 feet to about 80 feet.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Study of New London County, Connecticut map number 09011C0483J with an effective date of August 5, 2013, the proposed development is located within Zone X (Unshaded). Zone X (Unshaded) is considered a Low-Risk Area and described by FEMA as areas outside the 0.2-percent-annual-chance flood. No base flood elevations or base flood depths are shown within these zones; see Figure 2.

According to the USDA Natural Resources Conservation Service Web Soil Survey, the site's soil type varies throughout. The site is mostly classified as either Woodbridge fine sandy loam with a D hydrologic rating with slopes between 0% and 3%, Paxton and Montauk fine sandy loams with a C hydrologic rating with slopes between 3% and 8%, or Urban land with a D hydrologic rating. Additionally, small portions of the site are classified as Woodbridge fine sandy loam with a D hydrologic rating with slopes between 3% and 8%, Paxton and Montauk fine sandy loams with a C hydrologic rating with slopes between 3% and 8%, very stony, and Charlton-Chatfield complex with a B hydrologic rating with slopes between 0% and 15%, very rocky.

There is one off-site wetland located off the southwest corner of the site. No site work is proposed within the 100-foot upland review area of this wetland or within the 100-foot vernal pool envelope. Another off-site wetland is located off the southeastern corner of the site. A small section of sidewalk is proposed within the upland review area of this wetland, however, the sidewalk is downgradient of this wetland and no direct impacts are proposed. A small portion of a vernal is located on the parcel to be retained by the Town of Waterford. No permanent site features will be located within the 100-ft vernal pool envelope. No direct impacts are proposed.

### Proposed Project

The proposed project consists of the construction of a ±87,500 square-foot footprint early childhood school. Additional improvements include new driveways, parking areas, stormwater and utility infrastructure, as well as hardscape and landscaped areas. A summary of the change in impervious is shown below.

**Project Site Impervious Cover [SF]**

| Existing Conditions | Proposed Conditions | Net Increase |
|---------------------|---------------------|--------------|
| ±162,430            | ±319,660            | ±157,230     |

The proposed stormwater system has been designed to maintain existing site hydrology to the maximum extent practicable. The majority of runoff from the new development will be collected in a traditional pipe and catchbasin network and conveyed to various stormwater management systems before discharging to either the southwestern property boundary or to the existing storm sewer system in Daniels Avenue. Water quality improvements include catchbasins with sumps, water quality unit, and underground and aboveground detention systems with outlet control structures. These water quality improvements have been designed to meet the minimum average annual pollutant load reduction targets for redevelopment sites per Table 4.3 of the 2024 CT *Stormwater Quality Manual*.

Details of the size and location of the stormwater network can be found on the Grading & Drainage Plans, detail sheets, and supporting calculations in the appendices of this report.

### **PEAK RUNOFF ANALYSIS (See Appendices A & B)**

The stormwater management system is designed to control the rate runoff from the site's watersheds to be equal or less than existing conditions up to, and including, a 100-year design storm event.

The peak runoff discharges for the existing and proposed conditions were analyzed using Soil Conservation Service (SCS) methodology which outlines procedures for calculating peak rates of runoff resulting from precipitation events as well as procedures for developing runoff hydrographs. The entire site was included in the analysis; see Figures EXWS and PRWS. Values for area, curve number (CN), and a time of concentration were calculated for the existing and proposed conditions.

The curve number is a land sensitive coefficient that dictates the relationship between total rainfall depth and direct storm runoff. The soils within the watershed are divided into hydrologic soil groups (A, B, C, and D). The SCS classification system evaluates the runoff potential of a soil according to its infiltration and transmission rates. "A" soils have the lowest runoff potential, while "D" soils have the greatest runoff potential. Soils within the project area are predominantly Woodbridge fine sandy loam with a "D" hydrologic rating, Paxton and Montauk fine sandy loams with a "C" hydrologic rating, or Urban land with a "D" hydrologic rating.

The time of concentration ( $T_c$ ) is defined as the time for runoff to travel from the hydraulically most distant point in the watershed to a point of interest. Values of time of concentration were determined for existing and proposed conditions based on land cover and slope of the flow path using methods outlined in TR-55.

For this study, a 24-hour NOAA D rainfall distribution was used to determine the peak flow rate to all points of discharge from the site. Precipitation data used for the various storm events is based on the "NOAA Atlas 14 Point Precipitation Frequency Estimates: CT" for the location as



shown in Graphic 1. A summary of all rainfall data utilized in the analysis for this site is provided below and a complete compilation of data provided by NOAA for this location is included in Appendix C.

**Graphic 1. NOAA Rainfall Data Location Map**



**NOAA Precipitation Depth per Average Recurrence Interval [in]**

| Duration | 2-Year | 10-Year | 25-Year | 100-Year |
|----------|--------|---------|---------|----------|
| 24-hour  | 3.44   | 5.14    | 6.21    | 7.85     |

### Existing Condition (See Appendix A)

The project area's existing drainage conditions were analyzed as Watersheds 1, 2, and 3 (See Drawing EXWS).

Existing Watershed 1 is approximately 8.21 acres and consists mostly of grassy and wooded areas south of the existing school. Stormwater runoff from this watershed flows overland to the west and towards the off-site western wetland.

Existing Watershed 2 is approximately 5.53 acres and consists of the existing school parking area and grass areas west of the school. Stormwater runoff from this watershed flows overland to the northwest and towards the stormwater network within Daniels Avenue.

Existing Watershed 3 is approximately 2.56 acres and consists mostly of grassy and paved areas east of the existing school. Stormwater runoff from this watershed flows overland to the northeastern wetland.

#### **Proposed Condition (See Appendix B)**

In the proposed condition, the site hydrology has been designed to match existing conditions to the maximum extent possible, and all watershed design points remain the same.

Proposed Watershed 1 has been divided into two sub-watersheds: Proposed Watershed 1A and Proposed Watershed 1B. Proposed Watershed 1A is about 3.81 acres and consists of the southern parking lot and some landscape areas. Stormwater from these areas will be collected in a series of catch basins before being directed to a proposed underground infiltration system (System 1A). Discharge from this system will then be routed to an outfall located to the southwest. Proposed Watershed 1B is about 2.86 acres and consists of mostly grassy and some hardscaped areas. Stormwater from these areas will continue to flow west, overland, to the existing off-site wetland.

Proposed Watershed 2 has been divided into three sub-watersheds: Proposed Watershed 2A, Proposed Watershed 2B, and Proposed Watershed 2C. Proposed Watershed 2A is about 3.41 acres and consists mostly of roof tops, amenity and some landscape areas. Stormwater from these areas will be collected in roof drains and a series of yard drains before being directed to a proposed aboveground infiltration basin (System 2A). Discharge from this system will then be routed to the existing stormwater system in Daniels Avenue. Proposed Watershed 2B is about 3.19 acres and consists of the northern parking lot, site driveway, roof tops, amenity and some landscape areas. Stormwater from these areas will be collected in roof drains and a series of catch basins before being direct to a proposed underground infiltration basin (System 2B). Discharge from this system will then be routed to the existing stormwater system in Daniels Avenue. Proposed Watershed 2C is about 1.68 acres and consists of mostly grassy areas. Stormwater from these areas will continue to flow northwest, overland, to the existing stormwater system in Daniels Avenue.

Proposed Watershed 3 is about 1.35 acres and consists mostly of grassy and wooded areas. Stormwater from these areas will continue to flow northeast, overland, to the northeastern wetland.

Details of the sizes and locations of the stormwater collection systems can be found on drawings CG101 and CG102. On-site infiltration test was performed on April 16<sup>th</sup>, 2025, by Langan Engineering. Refer to Appendix F for test locations, results and test pit information. A 50% reduction was applied to the slowest test result for each system, see summary table below.

| Detention System | Design Infiltration Rate |
|------------------|--------------------------|
| 1A               | 2 in/hr                  |
| 2A               | 0.25 in/hr               |
| 2B               | 2 in/hr                  |

**Site Discharge Peak Flow Comparison for WS-1 (CF)**

| Storm    | Current | Proposed | Delta | % Reduction |
|----------|---------|----------|-------|-------------|
| 2-Year   | 10.65   | 5.03     | -5.62 | -53%        |
| 10-Year  | 20.01   | 13.53    | -6.48 | -32%        |
| 25-Year  | 26.08   | 18.28    | -7.80 | -30%        |
| 100-Year | 35.44   | 28.67    | -6.77 | -19%        |

**Site Discharge Peak Flow Comparison for WS-2 (CF)**

| Storm    | Current | Proposed | Delta | % Reduction |
|----------|---------|----------|-------|-------------|
| 2-Year   | 10.97   | 4.78     | -6.19 | -56%        |
| 10-Year  | 18.68   | 10.58    | -8.10 | -43%        |
| 25-Year  | 23.53   | 17.35    | -6.18 | -26%        |
| 100-Year | 30.92   | 24.24    | -6.68 | -22%        |

**Site Discharge Peak Flow Comparison for WS-3 (CF)**

| Storm    | Current | Proposed | Delta | % Reduction |
|----------|---------|----------|-------|-------------|
| 2-Year   | 4.62    | 1.69     | -2.93 | -63%        |
| 10-Year  | 8.34    | 3.51     | -4.83 | -58%        |
| 25-Year  | 10.73   | 4.74     | -5.99 | -56%        |
| 100-Year | 14.39   | 6.67     | -7.72 | -54%        |

**Site Discharge Peak Flow Comparison for Total Site (CF)**

| Storm    | Current | Proposed | Delta  | % Reduction |
|----------|---------|----------|--------|-------------|
| 2-Year   | 25.00   | 10.37    | -14.51 | -58%        |
| 10-Year  | 44.96   | 24.83    | -19.81 | -44%        |
| 25-Year  | 57.76   | 37.84    | -19.46 | -34%        |
| 100-Year | 77.45   | 58.86    | -17.89 | -23%        |

As can be seen from the tables above, runoff from each watershed and the total site will be reduced for the storms up to, and including, the 100-year storm. Additionally, per the 2024 CT *Stormwater Quality Manual* requirements, runoff from each watershed that includes proposed site development will be reduced by 50% for the 2-year storm event.



## **STORMWATER CONVEYANCE SYSTEM (See Appendix D)**

The stormwater conveyance system was sized using the Rational Method for the 10-year storm event. Values for area, runoff coefficient, C, and a time of concentration were calculated for each drainage area. The average runoff coefficient was calculated based upon the following cover types:

| <u>Cover</u>             | <u>C</u> |
|--------------------------|----------|
| Grass/Pervious           | 0.3      |
| Roof/Pavement/Impervious | 0.9      |

Rainfall intensities were taken from the "NOAA Atlas 14 Point Precipitation Frequency Estimates: CT". Stormwater pipes were then sized based upon the Manning's Equation for full flow pipe capacity and solving for the hydraulic grade line. The computer program Hydraflow Storm Sewers 2011 by Intellisolve was used in the analysis.

The proposed storm sewer system has been analyzed using a starting HGL elevation equal to the outlet pipe's crown elevation. This mimics a tailwater elevation equal to the outlet pipe's diameter or a scenario where a proposed pipe is entering an existing pipe flow at full capacity.

## **STORMWATER QUALITY (See Appendix E)**

The proposed stormwater management system has been designed to incorporate stormwater quality measures including catch basins with sumps, water quality units, underground and aboveground detention systems with outlet control structures. These measures will be implemented to increase water quality, maintain pre-development hydrology and minimize the passage of pollutants to the existing stormwater systems as compared to current conditions to the maximum extent achievable.

Standard 2 - Stormwater Runoff Quantity Control, was prioritized due to concerns about discharge upgradient of residential properties and the limited capacity of the existing storm sewer network in Daniels Avenue. Therefore, due to the site's presence of groundwater and low infiltration rates, the stormwater runoff volume retained on-site (as dead storage) does not meet the required retention volume (100% of the site's WQV). However, per the 2022 New England Stormwater Retrofit Manual performance curves for infiltration basin (HSG C & D), the retention volumes provided exceeds the required minimum average annual pollutant load reduction requirements for redevelopment sites listed in Table 4.3 of the CT Stormwater Quality Manual. The WQV is fully infiltrated for all design storms across the site, except for Pond 2A, where the

infiltration rate does not make it feasible due to poor infiltration rates. A summary of the retention volume (as dead storage) for each stormwater basin is summarized below (see Appendix E).

| Detention System | 2022 NE Stormwater Retrofit Minimum Retention Volume | Provided Retention Volume |
|------------------|------------------------------------------------------|---------------------------|
| 1A               | 1,689 CF                                             | 1,809 CF                  |
| 2A               | 3,576 CF                                             | 3,651 CF                  |
| 2B               | 2,832 CF                                             | 2,891 CF                  |

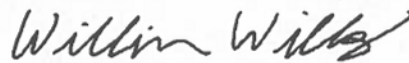
Each water quality unit has been sized to treat the water quality flow for 100% of the WQV. We will utilize Contech CDS hydrodynamic separators (water quality units) as pretreatment units, which are rated to provide 80% TSS removal. Additionally, per the New England Stormwater Retrofit Manual, the retention volume provided by pond 1A provides 80% TSS removal and ponds 2A and 2B provide 92% TSS removal.

## CONCLUSION

The proposed stormwater management system has been designed in general accordance with the 2024 CTDEEP Stormwater Quality Manual, 2000 CTDOT Drainage Manual, and the Town of Waterford ordinances for stormwater management (Section 25.6). It has been designed to mimic existing site hydrology to the maximum extent practicable with no increase in the peak flow rates.

This Langan report confirms that the proposed stormwater management system, as designed, will effectively manage quality and quantity of stormwater runoff for the proposed development. Please refer to the Drawings for additional drainage information.

Sincerely,  
**Langan Engineering and Environmental Services, LLC**



Bill Willsey, P.E.  
Senior Staff Engineer



Kathryn Gagnon, P.E., LEED AP  
Senior Project Manager

#### **LIST OF FIGURES**

|               |                       |
|---------------|-----------------------|
| <b>Fig. 1</b> | <b>Location Map</b>   |
| <b>Fig. 2</b> | <b>FEMA Flood Map</b> |
| <b>Fig. 3</b> | <b>NRCS Soil Map</b>  |

#### **LIST OF DRAWINGS**

|             |                                          |
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| <b>EXWS</b> | <b>Existing Watershed Map</b>            |
| <b>PRWS</b> | <b>Proposed Watershed Map</b>            |
| <b>DACB</b> | <b>Drainage Area Catchment Basin Map</b> |

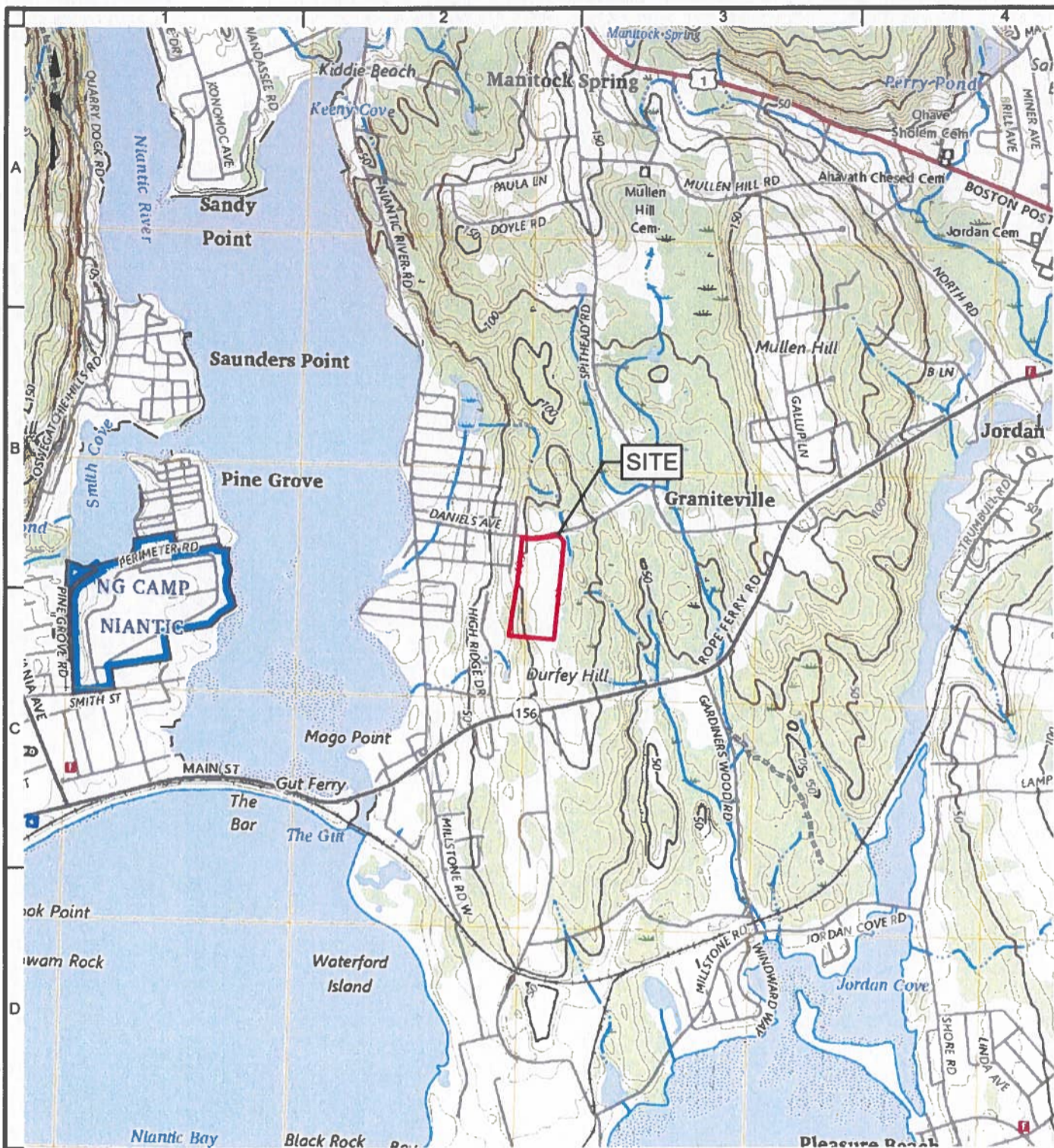
#### **REFERENCE DRAWINGS**

|              |                                                         |
|--------------|---------------------------------------------------------|
| <b>CG100</b> | <b>Overall Grading &amp; Drainage Plan</b>              |
| <b>CG101</b> | <b>Grading &amp; Drainage Plan I</b>                    |
| <b>CG102</b> | <b>Grading &amp; Drainage Plan II</b>                   |
| <b>CE100</b> | <b>Overall Soil Erosion &amp; Sediment Control Plan</b> |
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| <b>Appendix C</b> | <b>NOAA Rainfall Data</b>                                          |
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| <b>Appendix E</b> | <b>Supporting Calculations</b>                                     |
| <b>Appendix F</b> | <b>Test Pit &amp; Infiltration Logs</b>                            |
| <b>Appendix G</b> | <b>Stormwater Management System Operation and Maintenance Plan</b> |





#### Legend

Approximate Site Boundary

2,000 0 2,000  
SCALE IN FEET

#### NOTES:

1. BASEMAP ADAPTED FROM UNITED STATES GEOLOGICAL SURVEY (USGS) 7.5-MINUTE SERIES TOPOGRAPHICAL MAPS, NIANTIC, CONNECTICUT, QUADRANGLE, DATED 2024.

# LANGAN

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Langan Engineering, Environmental, Surveying,  
Landscape Architecture and Geology, D P C  
Langan International LLC

Collectively known as Langan

Project

## LEARN SCHOOL

51 DANIELS AVENUE

WATERFORD

CONNECTICUT

Figure Title

## SITE LOCATION MAP

Project No.

140310301

Date

3/18/2025

Scale

1"=2,000'

Drawn By

MG

Submission Date

Figure No.

1

**TAB 9**



**LEARN Response to Environmental Planner Comments**  
**New School – 51 Daniels Avenue**

LEARN appreciates the opportunity to benefit from the Town of Waterford's pre-application review process. LEARN submitted draft plans to the Town professional staff on March 27, 2024. We received consolidated comments from the Waterford Environmental Planner, Maureen Fitzgerald on April 9, 2025 regarding LEARN's Preliminary Application for its proposed new school project and pickleball courts to be located at 51 Daniels Avenue. The Environmental Planner's comments are below followed by LEARN's narrative response to each comment and references to the updated plans and reports as needed.

For ease of review, the Town professional staff comments are in *italics* and the Learn responses are in **bold**.

1. *Recommend test holes be conducted in areas proposed for subsurface detention. Field percolation rate verifications for subsurface units and proposed bio-swale / bio-retention area.*

**RESPONSE:** Test pits and percolation tests were performed on 4/16/25 and results have been provided in Appendix F of the Stormwater Management Report submitted with the revised application materials. Based on the percolation test data the stormwater system as designed will achieve peak flow rate reduction of greater than 50 percent for the two-year storm in each of the three watersheds on site and for the site as a whole as recommended in the 2024 CT Stormwater Manual. Additionally, the proposed system will improve over existing conditions by providing significant reductions in peak flow rates for all storm events up to and including the 100-year storm.

2. *Soil hydrologic class D, soil infiltration not anticipated, so units basically detention*

**RESPONSE:** Test pits and percolation tests were performed in the areas of the proposed detention systems. The design is based on the test results, as detailed in the Stormwater Management Report. To be conservative, a 50 percent reduction was applied to the slowest percolation test results.

3. *What measures are proposed for water quality treatment and pre-treatment?*

**RESPONSE:** Proposed stormwater quality measures to improve the site include water quality units, catch basins with sumps, above and below-ground infiltration systems. The system will increase the stormwater quality.

4. *Any consideration of breaking up IA into smaller discharge or treatment points such as rain gardens before discharging towards municipal system? LID implementation?*



**RESPONSE:** The design has been optimized to address stormwater management needs while providing sufficient programming space for the school in light of the decreased acreage that LEARN is acquiring and to minimize disturbance to the extent possible.

5. *Plans will require design specifications/details for the bioswale construction. Recommend designing this a wet bioretention design to maximize pollutant renovation before discharge to municipal stormwater system. The receiving coastal water (Niantic River) is listed by the State as impaired for bacteria & nitrogen loading.*

**RESPONSE:** The western stormwater management area has been redesigned based on field data, investigation and the confirmation of the proposed property line. It is not designed as a wet basin due to it's proximity to the school. It primarily receives roof water. Detail of the basin is shown on CG503 and a description of the stormwater quality measures proposed is included as a section in the Stormwater Management Report.

6. *Detail should indicate elevations, typical cross-section, substrate material type and depth, seed mixture/planting plan, temporary erosion control measures proposed until vegetative cover is established.*

**RESPONSE:** The plans have been updated to include additional details regarding measures to install and stabilize the substrate materials. Details have been provided in the CG and CE series of plans and details as well as the construction sequence on CS003.

7. *Staff recommends examination of existing soil saturation in the area of the proposed swale as it will potentially affect available storage depth and duration of retention for water quality renovation.*

**RESPONSE:** As noted, percolation testing was performed and the design has been adjusted based on testing results.

8. *Concern with proposed new outlet at SW end of site from sub-surface detention chambers. Provide calculated peak flows and volumes for 2, 10, & 25-year storms and address measures to reduce concentrated flows down-gradient. From drainage report appendix printouts, discharge at this outlet for the 10 and 25-year storm events is 12 cfs and 16 cfs. Outlet controls needed. Receiving hillside is primarily a groundwater discharge zone with limited ability to absorb surface flows for a large part of the year. Recommend incorporating a level spreader to diffuse flows at this outlet.*

**RESPONSE:** Overflow discharge from the southern underground detention system has been rerouted to direct water away from the southern/southeastern property line. Additional outlet protection has been detailed, including a scour hole and level spreader.

9. *An Impact assessment from this discharge on the downslope shallow stormwater swale, located along rear property lines of homes on High Ridge Road, and its conveyance capacity may be required to assure no off-site residential impacts. Existing swale conveyance flows north along the rear property line of homes on High Ridge Road, then directly west between two homes (and in-ground pools) into a manhole. It receives stormwater run-off from the (2) treatment basins at the southern abutting Sea View Terrace subdivision.*

**RESPONSE:** Overflow discharge from the southern underground detention system has been rerouted to direct water away from the southern/southeastern property line. Additional outlet protection has been detailed, including a scour hole and level spreader.

10. *Application will need a stormwater management / maintenance plan and a narrative as to how the design meets the requirements of Section 25.6 of the Zoning Regulations and meets the definition of "Maximum Extent Achievable" for LID implementation and water quality renovation per the State Stormwater Quality Manual.*

**RESPONSE:** A Stormwater Management System Operation and Maintenance Plan has been provided as Appendix G of the Stormwater Report .

11. *A letter report regarding the on-site and adjacent wetland / vernal pool resource and potential project impacts to the wetland is recommended to accompany the application.*

**RESPONSE:** A Wetland Assessment Report from LEARN's expert, Dean Gustafson of All-Points has been provided under separate cover. The Report concludes that there are no proposed direct wetland or vernal pool activities and that the minor activities in the far ends of the upland review area will not adversely impact the wetlands or vernal pool. The Report makes some recommendations including vegetative enhancements in the upland review area all of which are accepted.

12. *Site plans should include a construction sequencing narrative identifying major site work phases, temporary construction stormwater control measures, time estimate for application of permanent seeding to stabilize competed phases and reduce extent of overall land disturbance, and when the stormwater treatment measures are to be completed and connected to the site drainage system.*

**RESPONSE:** Phasing and Construction sequencing are provided, see CS003.

13. *Temporary sediment traps may be necessary to reduce sedimentation impacts to down-gradient properties and the proposed permanent bio-swale. If proposed include size and typical detail in plan set.*

**RESPONSE:** The use of temporary sediment traps is contractor means and methods. The Contractor will be required to conform with the CTDEEP Construction General Permit. If they feel they need temporary sediment traps to satisfy the requirements, they should be provided.

14. *Clarify Soil Erosion Control Note #15.*

**RESPONSE:** The note has been revised to read: The contractor shall correct any omissions, errors, or field operations immediately and in accordance with the guidelines for soil erosion and sediment control.

15. *Clarify if rain gardens are proposed as noted on the narrative sheet.*

**RESPONSE:** There are no rain gardens proposed.

16. *If the pickle ball courts are remaining as part of the overall project site plan application, the limits of disturbance and extent of site grading and construction activity for this amenity must be shown on the overall site plan sheets and the grading and S&E control plan sheets. This is located within the upland review area of an inland wetland that is partially on the subject property and is an off-site vernal pool breeding area.*

**RESPONSE:** The pickleball court design has been submitted as a separate application package because the pickleball courts will be located on the portion of the site to be retained by the Town and will be owned and operated by the Town. A separate wetland assessment has been provided as a part of the pickleball court application.

17. *As noted, the site work will require registration for a CT DEEP General Permit for Construction Stormwater discharge.*

**RESPONSE:** Acknowledged. The project will be registered to the CT DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction prior to the start of construction.



# **TAB 10**

# SHIPMAN

Matt Ranelli  
Phone: (203) 836-2805  
MRanelli@goodwin.com

265 Church Street  
Suite 1207  
New Haven, CT 06510

May 2, 2025

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Jill Stevens  
Director of Utilities  
Waterford Utility Commission  
15 Rope Ferry Road  
Waterford, CT 06385

Re: Notice Pursuant To Conn. Gen. Stat. §§ 8-3i And 22a-42f Of Application For Determination Of No Regulated Activities Or, In The Alternative, Approval Of Regulated Activities Associated With A Proposed New School Facility At 51 Danials Avenue, Waterford, Connecticut

Dear Director Stevens:

Pursuant to Conn. Gen. Stat. §§ 8-3i and 22a-42f, we are writing to inform you of an application filed on behalf of our client LEARN Regional Educational Service Center to construct a new school facility on property located at 51 Daniels Avenue in Waterford, Connecticut. The application was filed with the appropriate Waterford land use agencies and is available at the Waterford Town Hall, 15 Rope Ferry Rd, Waterford, CT 06385.

If you have any questions regarding this application or would like a courtesy copy, please contact me at (860) 251-5748.

Sincerely,

*Matthew Ranelli*  
Matthew Ranelli

GMR:mm