

Technical Memorandum



To: Mr. Jeffrey Folder, Senior
Environmental Planner

From: Megan B. Raymond, MS, PWS, CFM

SLR International Corporation

Company: Planning Department, Town of South
Windsor

Date: August 31, 2023

Project No. 141.20442.00001

**RE: 240 Deming Street – Additional Soil Investigations
South Windsor, Connecticut**

SLR International Corporation (SLR) soil scientists visited the 6.3-acre project site at 240 Deming Street in South Windsor, Connecticut to collect additional data regarding the site's regulated wetland resources. Specifically, the areas of investigation (AOI) focused on three areas: (1) the southwestern portion of the property; (2) the western/central white pine alley; and (3) the terminus of the intermittent watercourse in the northern portion of the property. The AOIs are described further below. In summary, all three areas were found to be non-regulated uplands. As described in the SLR *Wetland Delineation and Impact Assessment Report*, dated June 28, 2023, regulated wetland resources on site are comprised of a 260-linear foot (LF) intermittent watercourse.

Southwestern Area of Investigation

A portion of the southwestern property along Deming Street was identified due to Natural Resources Conservation Service (NRCS) Web Soil Survey mapping. The NRCS map depicts a hydric soil unit (12 – Raypol silt loam) extending north across Deming Street, with a small portion of the polygon (<0.1 acre) displayed onsite. In this area, vegetation consists of manicured lawn with scattered Eastern white pine (*Pinus strobus*), Norway spruce (*Picea abies*), and arborvitae (*Thuja* sp.) trees, sloping north from Deming Street and the adjacent sidewalk.

A Dutch auger was used to observe the color and morphology of soils from 0 to 24 inches in depth. A soil core was taken near the center of the NRCS-mapped Raypol area. From 0 to 18 inches, the very friable silt loam soil was identified as 10YR 3/3 in hue. From 18 to 24 inches, a silt loam of similar texture was identified as 10Y/R 4/4 in hue, with some faint concentrations (7/5YR 4/6) and few faint depletions (10YR 2/1). No water table or saturation was encountered; no surface water was observed. Based on these results, this soil was classified as non-hydric.



Southwestern Area of Investigation (Facing East)



Soil Core within Southwestern Area of Investigation

It should be noted that digital soil mapping is intended to be used at a macro-scale and does not necessarily represent current site conditions. Furthermore, the area of investigation is near Deming Street and adjacent sidewalk, which may have disturbed soil conditions that existed previously.

Central Area of Investigation

A second area of investigation was identified within an alley of eastern white pines in the western/central portion of the property. This area was identified due to a reported observation of an obligate wetland plant species – skunk cabbage (*Symplocarpus foetidus*). No skunk cabbage was found in this area; it is likely that the observer mistakenly identified common burdock (*Arctium minus*), a similarly-looking facultative upland species, for skunk cabbage. Common burdock was observed in multiple locations along the white pine alley, which also consists of autumn olive (*Elaeagnus umbellata*), northern catalpa (*Catalpa speciosa*), white mulberry (*Morus alba*), Asiatic bittersweet (*Celastrus orbiculatus*), poison ivy (*Toxicodendron radicans*), Virginia creeper (*Parthenocissus quinquefolia*), American pokeweed (*Phytolacca americana*), white clover (*Trifolium repens*), bedstraw (*Galium* sp.), and various grasses. Of the identified species, none are classified as facultative wetland or obligate wetland species in this region by the U.S. Army Corps of Engineers (USACE).



Common Burdock Likely Mistaken for Skunk Cabbage

A soil core was taken in the area identified, near a large burdock. Soil morphology was able to be observed to approximately 20-inches in depth before encountering a restrictive layer of compacted soil. From 0 to 2 inches, the silt loam soil contained many roots, no redoximorphic features, and was identified as 10YR 3/6 in hue. From 2 to 12 inches, it contained few roots, no redoximorphic features, and was identified as 10YR 4/6 in hue. From 12 to 20 inches, no roots were observed and few faint concentrations (7.5YR 4/6) were observed. The dominant matrix color was 10YR 5/4. The soil was loose and friable throughout, with no water table or saturation encountered within 20 inches. Based on these results, this soil is classified as non-hydric.



Soil Core within Central Area of Investigation

Northern Area of Investigation

The third area of investigation was identified in the northern portion of the property, just beyond the downstream (western) terminus of the delineated intermittent watercourse. As noted in the soil report, the terminus of the intermittent watercourse was determined by the regulatory definition [CGS Sec. 22a-38 (16)], which in addition to other characteristics, requires a defined permanent channel and bank. The presence of permanent channel and bank terminates at the



final flags (IWC-10), at which point water begins to dissipate through infiltration and evaporation. The area where the dissipation occurs is primarily vegetated by jewelweed (*Impatiens capensis*) and garlic mustard (*Alliaria petiolata*), facultative wetland and facultative upland species, respectively.

On the day of investigation, surface water lacking a channel was observed up to approximately 6 feet beyond the final intermittent watercourse flag. Dissipation through infiltration and evaporation occurs in the non-hydric soils within the area of investigation. No additional wetland and/or watercourse resources were delineated on site. Again, the area does not meet the statutory definition of an intermittent watercourse and the occasional presence of water in this area is typical of its landscape position.

Thank you for the opportunity to assist you. If you have any questions regarding the above information, please do not hesitate to contact me at mraymond@slrconsulting.com or by phone at 203-344-7887.

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Dissipation Occurring within Northern Area of Investigation

