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WETLAND BOUNDARIES • POND & LAKE MANAGEMENT • CONSTRUCTION FEASIBILITY CONSULTATIONS • ENVIRONMENTAL STUDIES

Environmental Report

24 Commerce Drive, Monroe

Date: February 23, 2022

By: Steven Danzer Ph.D.

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– Registered with the Society of Soil Scientists of Southern New England.
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- Arborist - CT DEEP License S-5639; ISA Certified NE-7409A.

- Ph.D. - Renewable Natural Resource Studies.

INTRODUCTION

Regulated activities are proposed adjacent to the wetlands located at 24 Commerce Drive, Monroe, Connecticut. The site is located in an industrial zone. The regulated activities include the construction of two buildings, parking, clearing of vegetation within the upland, land grading, and installation of a subsurface stormwater detention system, as indicated on the plans prepared by J. Edwards & Associates LLC.

The property is 3.16 acres. The proposed activities will occur mainly on upland areas that have been previously cleared and/or disturbed through cutting and filling. The construction activity will occur west of an existing boulder demarcation wall which separates the development envelope from a more natural area which includes wetland buffer and the West Branch Pequonock River.

LANDSCAPE CONTEXT

Land-use adjacent to the site is currently maintained as industrial and office, similar to what is being proposed. The site is located at the eastern end of the cul-de-sac. The parcel to the north is fully developed with a 87000 sf (1.9 acre) industrial building situated close to the common property line. The parcel to the south is forested, with off-site wetlands located approximately 75-100 feet to the south of the southern property line. To the east is a wooded corridor containing the West Branch Pequonock River.

WETLAND RESOURCES

The wetlands were delineated by Roy Shook Associates during a field investigation conducted on 7/13/10, and documented in the Soil Report dated 7/14/10. Wetland soils within the area of investigation were characterized at the time as Pootatuck soils, Rippowam soils, and Saco soils. NRCS mapping at a broader scale classifies the soils on site as within the Pootatuck fine sandy loam mapping unit (#102). Pootatuck soils are alluvial and floodplain soils.

Wetland resources located within the property includes a segment of the West Branch Pequonock River and its forested floodplain. The river flows southerly throughout the far eastern region of the site. The river channel is wide and shallow, with a small island. Once the river reaches the southern property line the grade drops due to rocky control, and the channel morphology transforms from a shallow channel to a pool and riffle configuration.

A line of boulders, placed previously, separates the forested floodplain and its relatively natural upland buffer from the previously disturbed region of the site where the proposed activity will occur.

Dominant overstory vegetation within the floodplain buffer includes Red Maple, Beech, Red Oak, Black Birch and Pine. Young Birch and Blueberry dominate the midstory. Deer damage to the existing midstory and understory vegetation is evident and widespread.

The functions and values of the floodplain wetlands were assessed. The stream corridor is wide with gentle banks, providing opportunity enough to support *floodflow alteration*, *sediment/shoreline stabilization*, and *groundwater discharge*. The river corridor is likely substantial enough to support *fish habitat*, and the adjacent floodplain and buffer is contiguous enough to support *wildlife habitat*. The floodplain wetland area can potentially offer *sediment/toxicant retention* and *nutrient removal* due to its proximity to existing developed properties, and the existing vegetation could provide food for wildlife,

(*production export*). There are limited opportunities for recreation west of the river, due to the proximity to developed areas, but the east side (off-site) of the river (water company lands) may have a vestigial remnant of a trail.

NDDDB SEARCH

According to the CT DEEP Natural Diversity Database layer on CT ECO (cteco.uconn.edu) (webpage from 2/21/21 attached at the end of this report) there are no polygons on or directly adjacent to the site that indicate the presence of any Endangered, Threatened, or Species of Special Concern. The nearest polygons are 4.6 miles to the southwest, and 4.9 miles to the northeast. Nor are there any polygons on or near to the site that indicate the presence of any Critical Habitat.

PROPOSED ACTIVITIES

The regulated activities include the construction of two buildings, parking, clearing of vegetation within the upland, land grading, and installation of a subsurface stormwater detention system. All of this (except for a level spreader) will occur in the uplands located west of the line of existing boulders. The boulders separate the previously disturbed region of the site from the more natural remaining wetland buffer. The level spreader will occur in uplands a few feet east of the boulder wall.

As discussed earlier, the upland region of the site has been previously disturbed. Ground cover within the first 150 feet of the site (as accessed from the road) is a mixture of asphalt and gravel, surrounded by early successional herbaceous and woody vegetation such as Ragwort and Goldenrod. Farther in, the landscape becomes hilly due to cutting and filling, and vegetated by a tangle of Japanese Knotweed, Mugwort, Multi-flora Rose, Ragweed, and Goldenrod, with young Birch and Oak seedlings and saplings on the perimeter. Below the slope, extending easterly to the line of boulders, the dominant woody vegetation includes young Birch, Red and Black oak.

The majority of the vegetation cited above will be removed to accommodate grading and development, though there may be some trees preserved along the northern periphery of the development envelope.

A stormwater management system is proposed, consisting of catchbasins, subsurface galleries, and a level spreader.

The site will be served by septic. Two sets of leaching galleries will be located near the cul-de-sac, on the western edge of the site, approximately 210-235 feet from the floodplain and 300 feet from the river.

The only activity to occur east of the existing line of boulders/proposed wall is the level spreader, to be located approximately 30 feet upslope from the floodplain.

Discussion/Analysis

The project was reviewed to determine if there were any significant impacts to the wetland resources, pursuant to the definition of “Significant Impact Activities” contained within Section 2.1 of the Inland Wetlands and Watercourses Regulations of the Town of Monroe.

According to Section 2.1, “Significant Activity” include activities that involve (to summarize) a) deposition or removal of material; b) substantially changes the natural channel or may inhibit watercourse dynamics; c) substantially diminish the natural capacity of the wetland resources or provide other functions; d) cause or potentially cause substantial turbidity, siltation or sedimentation; e) cause substantial diminution of flow or groundwater levels to the wetland resources; f) cause or potentially cause pollution; and g) damage or destroys unique, scientifically or educationally valuable wetland areas.

As per the above definition, the project will not cause significant impacts to the wetlands for the following reasons:

- There is no work being proposed in the wetlands. The wetlands are located significantly lower in the landscape from the proposed activities, and are physically buffered from the primary work area by the existing line of boulders and by the proposed wall.
- Dense mature tree canopy largely does not exist within the proposed development envelope. The proposed activities will be partially located over existing asphalt and gravel. In the area of the proposed development that is currently not paved, vegetation is predominately a mixture of herbaceous and young woody plants, with only a scattered amount of mature overstory trees. Therefore the development will not result in a significant loss of mature woody overstory within proximity to the wetlands.
- Although the wetland buffer east of the existing line of boulders/proposed wall is currently mainly in a natural state, it should be noted that a well still exists in the southern corner of this area. The wetland buffer around the well has been previously disturbed due to the water line (as per the photo at the end of this report).

- Erosion and sedimentation towards the wetlands will be prevented if the Erosion Control Plan is implemented.
- A stormwater management system is proposed to collect and detain runoff generated by the impervious surfaces, mitigating any stormwater impacts to the wetlands.
- The septic leaching galleries will be located near the cul-de-sac, in the northwestern corner of the site, approximately 235 feet from the floodplain and 350 feet from the river. These distances are adequate to prevent pollution of the river.

Thank you for the opportunity to comment.

Respectfully submitted,

Signed,

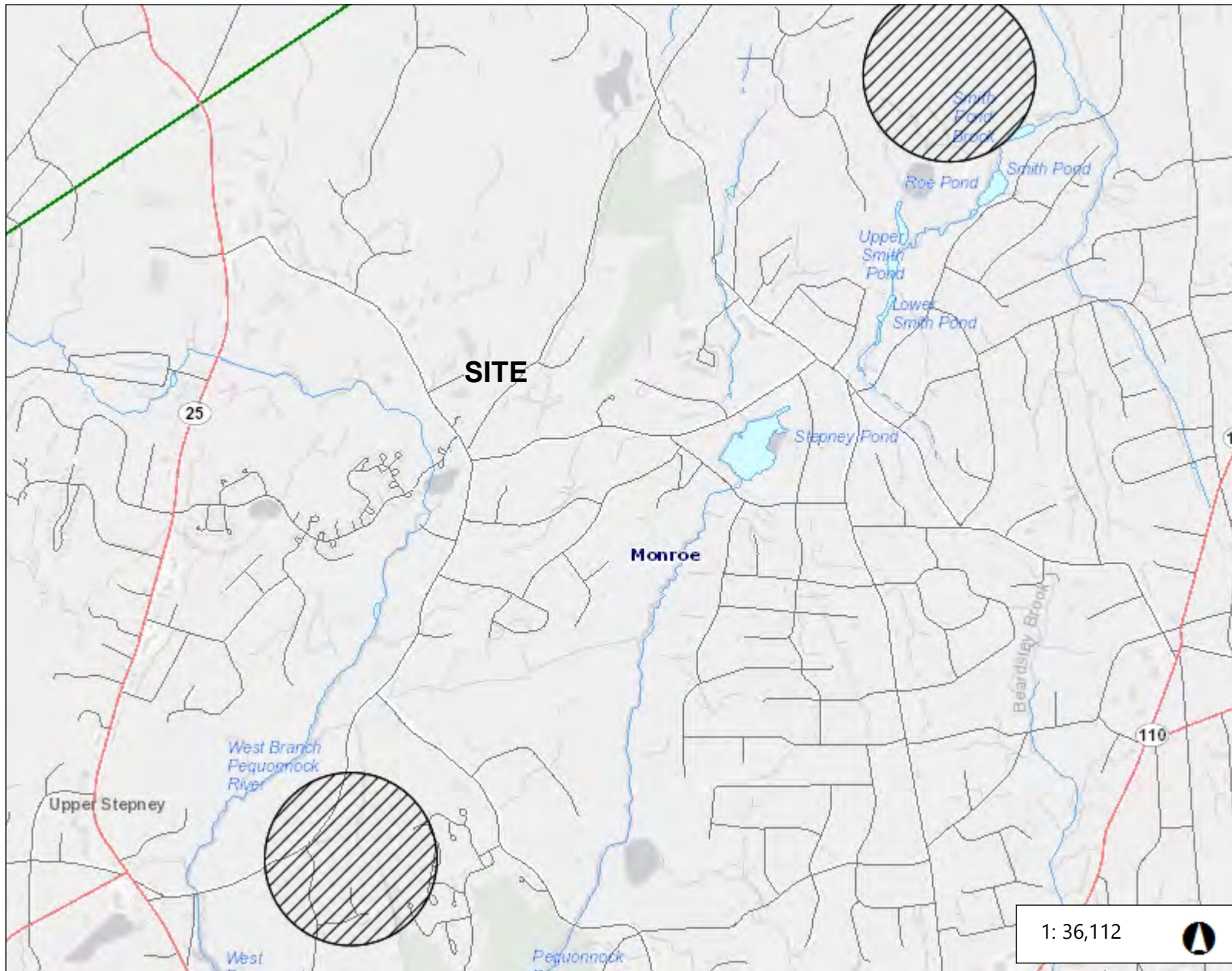
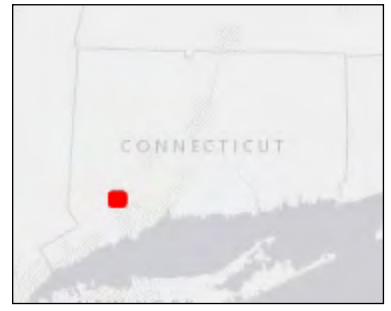


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Appendix A. NDDB - CT ECO
Appendix B. Photo



Legend

- Critical Habitat**
- Beachshore, B
 - Intertidal Marsh, IM
 - Acidic Atlantic White Cedar Swamp
 - Acidic Red/Black Spruce Basin Swr
 - Circumneutral Northern White Cedr
 - Floodplain Forest, FF
 - Beachshore, B
 - Circumneutral Spring Fen, CirSF
 - Floodplain Forest, FF
 - Freshwater Aquatic, FA
 - Medium Fen, MF
 - Poor Fen, PF
 - Rich Fen, RF
 - Sea Level Fen, SLF
 - Coastal Woodland/Shrubland, CW&S
 - Dry Acidic Forest, DAF
 - Dry Circumneutral Forest, DCF
 - Dry Subacidic Forest, DSF
 - Old Growth Forest, OGF
 - Subacidic Cold Talus Forest/Woodl
 - Acidic Rocky Summit Outcrop, AcR
 - Alluvial Grassland/Outcrop, AIG/O
 - Circumneutral Rocky Summit Outcr
 - Coastal Bluffs and Headlands, CBH
 - Coastal Grassland, CG

Notes

1.1 0 0.57 1.1 Miles

This map is intended for general planning, management, education, and research purposes only. Data shown on this map may not be complete or current. The data shown may have been compiled at different times and at different map scales, which may not match the scale at which the data is shown on this map.

24 Commerce Drive, Monroe



Photo 1. Line of Boulders: separating proposed parking in disturbed area (left of boulders) from the natural wetland buffer (right of boulders), looking north. **2/23/22.**



Photo 2. River and floodplain: northeast region of site, looking east. **2/23/22.**



Photo 3. River and floodplain: Looking east. 2/23/22.



Photo 4. Upland buffer to floodplain: Site of old well and historically disturbed soils. Southeast region of site, looking west (back to wetlands) **2/23/22.**