



PLANNING & DEVELOPMENT

Date: October 4, 2023

To: Waterford Conservation Commission
From: Maureen FitzGerald, Environmental Planner

Re: **Inland Wetland Application #23-08: 33 Kenyon Road**
Proposed Construction of New Building, parking, stormwater swale and utilities

Proposed Activity:

The application is for construction of a 3,760 sq. ft. building, an outbuilding, associated parking, driveway and sidewalk areas, and construction of a stormwater treatment swale on a vacant 2.58 acre parcel at 33 Kenyon Road, Waterford. The site will be serviced by municipal water and sewer utilities.

The proposed regulated activities include excavation and grading of 450 sq. ft. of inland wetland for construction of a stormwater treatment swale and disturbance of approximately 1.2 acres of upland review area adjacent to inland wetlands for the proposed site improvements.

The site contains primarily open field meadow vegetation with scattered trees. It previously contained a single residential structure which was demolished. The on-site wetland area was excavated as a shallow pond in the 1960's, based on a review of aerial photographs. A large forested wetland system occurs off the northern and western property boundaries, extending to Vauxhall Street Extension. This wetland is part of the Green Swamp Brook watershed area, which discharges to Lake Brandegee. (Refer to attached aerial photo 2019)

A wetland delineation and wetland functions and value assessment report prepared by James Sipperly, Certified Soil Scientist, CT Wetland Scientist has been submitted with the application. The report notes the area of direct wetland impact, along wetland boundary flags #21 through #26, has evidence of past ditching and grading activity to promote drainage. The report concludes the proposed construction activities will not have a significant adverse effect on the adjacent inland wetlands or watercourses on or off the site.

Application Review Comments:

The following review comments address the application materials received by the Conservation Commission on September 28, 2023.

- 1) Staff has requested the wetland boundary be reviewed by the wetland scientist and re-marked in the field as the boundary flags are no longer apparent.
- 2) The proposed construction impacts 450 sq. ft of inland wetland area. The application should provide a discussion of alternatives considered to avoid or reduce wetland impact and any measures considered to mitigate for unavoidable wetland impacts. The Conservation Commission will need to evaluate the impacts to determine if the proposal involves a significant wetland impact activity per Section 2.32 of the regulations.

- 3) To minimize direct discharge of stormwater to the seasonally ponded wetland area east of the swale, the opportunity to direct the swale discharge to the upland vegetated areas north and south of the on-site wetland to provide additional stormwater renovation should be evaluated.
- 4) The stormwater treatment system is proposed as an infiltration swale. Infiltration testing of in-situ soils has not been conducted to verify infiltration rates will meet CT DEEP Stormwater Manual (2004) criteria. The soil is classified as hydrologic group C, which has a minimum infiltration rate below the DEEP recommended 0.3 inch/hr. Saturated soil conditions were evident in the area of the proposed swale location in October 2023. The DEEP design criteria recommend infiltration areas be a minimum of 3 ft. above seasonal high groundwater, as documented by on-site soil testing. It is recommended this field testing be conducted during this design phase to verify stormwater infiltration can be utilized at this location. An alternate wet-bottom swale or basin design may be better suited to conditions.
- 5) Inclusion of biofiltration media into the swale construction is suggested to increase sediment and nutrient removal efficiency. Soil media recommendations from UNH Stormwater Center publications 2016 and 2020 recommend thicker soil media depth and reduced compost component.
- 6) The swale cumulative volume as presented in drainage calculations is less than the calculated water quality volume. The water quality volume from the post-construction condition should be captured and treated prior to discharge to wetlands.
- 7) The application should address the anticipated percent pollutant removal for the proposed stormwater treatment swale.
- 8) The ESC plan for project construction needs to include proposed stockpile locations and indicate the proposed temporary protections for the stormwater swale during construction.
- 9) A Site Stormwater Management manual is required per Section 25.6 of the zoning regulations. The O&M portion of this manual should include timing, frequency of inspection and maintenance tasks for the stormwater treatment system and LID components. Drainage calculations should demonstrate the design attenuates the 10-yr, 25-yr and 100-yr storm frequency to predevelopment discharge rates.
- 10) The final plan requires the signature of the wetland /soil scientist responsible for the wetland boundary delineation.