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FORESTRY SERVICES ~ WETLAND IMPACT ASSESSMENTS
WETLAND DELINEATIONS AND PERMITTING ~ E&S/SITE MONITORING
WETLAND FUNCTION/VALUE ASSESSMENTS

Town of Waterford
Conservation Commission
15 Rope Ferry Rd.
Waterford, CT. 06385

Attn: Maureen Fitzgerald, Environmental Planner

Re: Inland Wetland Application #C 21-04 198 Shore Road: Stream channel stabilization, application review comments.

Dear Commissioners:

The following is a response to Maureen Fitzgerald's review comments and suggestions, (by item #), which were taken into consideration regarding the revised site plan and application:

1.) The total cubic yardage of rip-rap to be utilized is approx. 60 yards based on the square footage of area. The typical depth would be an average of 1-2 feet depending on the depth of the eroded stream bank in any given location.

    A cross section detail was added on the plan showing a typical slope stabilization for any given section of stream bed.

2.) The rip-rap material will be placed by utilizing an excavator to reach across the stream bed from the southern side and by hand where necessary. Disturbance to the existing slopes will be kept to a minimum to prevent sedimentation. No stream crossings are proposed.

3.) The only other alternative is to abandon the streambank stabilization altogether, which I feel is not a viable option. Currently, the eroding banks deposit more sediments into the stream during every significant storm event than the proposed activity could possibly cause. Initial comments from Maureen influenced the reduction of proposed rip-rap fill by 50%. Vegetative solutions in this case I feel, would not prevent the erosion caused by the excessive stream flow velocities during significant storm events. In several places these flows are moving significant sized stones and eroding and exposing tree roots causing trees and clumps of alders to fall across the stream. Mr. Lombardi indicated to me that the size of the proposed rip-rap he intends to use is 8 to 10 inches in size.

4.) I have determined that the limit of the tidal wetlands does not exceed beyond wetland flags WF-17 (North side), and WF-13A (South side). This was determined at high tide on June 1, 2021. The rip-rap fill is not proposed within the tidal wetlands. (See site plan).

5.) All stream bank stabilization will occur during low flow, dry summer conditions.

6.) Silt fencing as well as staked haybales will be utilized to control potential sedimentation. Erosion control netting/blankets may be utilized if necessary.

7.) Seeding and mulching will be done in the riparian corridor. As these areas are relatively level, I do not expect any significant erosion or sedimentation occurring.

8.) No canopy trees are proposed to be removed. On the northern bank, 2 clumps of alders which erosion has undermined and fallen dead trees will be removed. CT. D.E.E.P. Forestry division recommends the no more than 25% of the canopy cover should be removed over/adjacent to streams to help prevent stream temperature increases. The removals of the alders and dead trees will not exceed 25% of the canopy cover.

    On the southern side of the stream outside the riparian corridor adjacent to the construction entrance, poorly formed, overmature red maples will be removed. These trees do not provide shade to the stream and their removal will not impact the stream functions and values.

Overall, I feel that the proposed activity, as revised, due to staff comments and suggestions, will be a significant improvement to the stream and riparian zone habitats and will prevent further erosion and sedimentation along the stream banks.

Thank you,

Joseph R. Theroux
Certified Soil Scientist