



GOVE ENVIRONMENTAL SERVICES, INC.

October 25, 2022

Doug MacGuire, PE
Vice President
The Dubay Group Inc.
Engineers | Planners | Surveyors
136 Harvey Road Bldg B101
Londonderry, NH 03053

Re: Fremont Road, Gravel Pit, Chester
Subject: Wetland Dewatering/Stowe Road Upgrade

Dear Mr. MacGuire:

Per your request I visited the above-referenced site and conducted data plots and assessed the areas of wetlands and adjacent uplands as it pertains to the potential issue of dewatering of the adjacent system as part of the gravel pit operation.

Wetland dewatering:

This wetland on the parcel, on the northeastern side, originates to the north on the opposite side of Fremont Road. The eastern wetland system converges with the larger wetland system to the west off property to the south of Stowe Road. Both wetland fingers continue south away from the property. The western wetland system flows north to south through the subject property in the same manner as the eastern wetland before they converge offsite below Stowe Road.

This wetland on the northern side has a high elevation of 270' in the upper reaches on the parcel. This drops in elevation from 270 at its highest, down to approximately 250', a 20-foot drop in elevation over the distance from the north to the south. This large wetland system is classified as a forested/scrub shrub wetland system with poorly drained Ridgebury soils. These soils are dominated by glacial till material with a mineral restrictive layer in the B-C layer, which is composed of varying degrees of firm material which creates a perched water table and limits the infiltration of water into the subsoil. While there is a ground water component, there was no significant ledge identified. Data plots were conducted both in the uplands and immediately adjacent to the wetland areas to examine the depth of the ESHWT and the presence of observed water. Overall, in the upland plots ESHWT was found between 20-30" and in the lower adjacent to "wetland" plots at 2-4". No data plots had any observed water table (water in the hole), and no seasonal water seeps were observed in any of the plots. This indicates a consistent ESHWT throughout the area and no heavy groundwater influence due to the lack of observed water to depths exceeding 9 feet.

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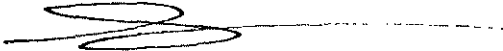
There is no proposal to trench through the site creating a travel way for surface water to drain out of the wetland. Large natural berms of uplands soils and unaltered vegetation are maintained between the existing wetland system and the proposed excavation areas.

Since this wetland system appears to be consistent with a "perched water table" sourced by offsite surface water flows and not sourced through an abundance of groundwater, the excavation process proposed will not dewater the existing adjacent wetlands, as they will continue to receive large areas of surface runoff and the mineral restrictive features found in the soils will limit the transmissivity of surface water to the adjacent excavation areas. Further, the natural sloping nature of the wetland system will continue to direct wetland flows to within the existing wetland channel system.

An additional note is that the open area of the current site off of Stowe Road, at the entrance of the pit area is at varying elevations of 270 down to 248, which is consistent with the elevation of the adjacent large wetland area and in many places lower in elevation. This area of the open pit did not have saturated soils or water on the surface during my observations of the site. The existing wetland system adjacent to this excavated area still displays typical wetland hydrology. These two observations would support the conclusion that the excavation operation will not have a dewatering effect of the wetland system to the north and east.

Please let me know if you have any questions or comments.

Sincerely,



Luke Hurley, CWS, CSS
Vice President
Gove Environmental Services, Inc.





GOVE ENVIRONMENTAL SERVICES, INC.

MAP 5 LOTS 85
152 FREMONT ROAD
CHESTER, NH

TEST PIT REPORT

TP DG1 DATE: 10/25/2022

0-4"	10YR 3/2, VERY DARK GRAYISH BROWN, FINE SANDY LOAM, GRANULAR, FRIABLE
4-14"	10YR 4/4, DARK YELLOWISH BROWN, FINE SANDY LOAM, GRANULAR, FRIABLE
14-30"	2.5Y 5/4, LIGHT OLIVE BROWN, FINE SANDY LOAM, GRANULAR, FRIABLE
30-50"	2.5Y 6/4, LIGHT YELLOWISH BROWN, FINE SANDY LOAM, GRANULAR, FRIABLE, 15% REDOX FEATURES
50-108"	2.5Y 6/3, LIGHT YELLOWISH BROWN, LOAMY FINE SAND, MASSIVE, FRIABLE
ESHWT: 30" OWT: NONE LEDGE: NONE	

TP DG2 DATE: 10/25/2022

0-4"	10YR 3/2, VERY DARK GRAYISH BROWN, FINE SANDY LOAM, GRANULAR, FRIABLE
4-10"	10YR 4/2, DARK GRAYISH BROWN, FINE SANDY LOAM, GRANULAR, FRIABLE, 15% REDOX FEATURES
10-18"	2.5Y 5/2, GRAYISH BROWN, FINE SANDY LOAM, PLATY, FIRM
18-56"	2.5Y 6/3, LIGHT YELLOWISH BROWN, FINE SAND, GRANULAR, LOOSE, 15% REDOX FEATURES
ESHWT: 4" OWT: NONE LEDGE: NONE	

TP DG3 DATE: 10/25/2022

0-5"	10YR 3/2, VERY DARK GRAYISH BROWN, FINE SANDY LOAM, GRANULAR, FRIABLE
5-20"	10YR 4/6, DARK GRAYISH BROWN, FINE SANDY LOAM, GRANULAR, FRIABLE
20-40"	2.5Y 5/3, LIGHT OLIVE BROWN, VERY FINE SAND, MASSIVE, FIRM IN PLACE, 25% REDOX FEATURES
40-96"	2.5Y 4/3, OLIVE BROWN, VERY FINE SAND, MASSIVE, FIRM IN PLACE, 15% REDOX FEATURES
ESHWT: 20" OWT: NONE LEDGE: NONE	

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TP DG4 DATE: 10/25/2022
 0-10" 10YR 3/1, VERY DARK GRAY, FINE SANDY LOAM, GRANULAR,
 FRIABLE. 10% REDOX FEATURES
 10-40" 2.5Y 5/2, GRAYISH BROWN, VERY FINE SAND, MASSIVE, FIRM IN
 PLACE, 25% REDOX FEATURES
 ESHWT: 2" OWT: NONE LEDGE: NONE

TP DG5 DATE: 10/25/2022
 0-6" 10YR 3/2, VERY DARK GRAYISH BROWN, FINE SANDY LOAM,
 GRANULAR, FRIABLE
 6-18" 10YR 4/6, DARK GRAYISH BROWN, FINE SANDY LOAM, GRANULAR,
 FRIABLE
 18-36" 2.5Y 5/3, LIGHT OLIVE BROWN, FINE SANDY LOAM, MASSIVE, FIRM IN
 PLACE, 15% REDOX FEATURES
 36-84" 2.5Y 4/3, OLIVE BROWN, VERY FINE SAND, MASSIVE, FIRM IN PLACE,
 15% REDOX FEATURES
 ESHWT: 24" OWT: NONE LEDGE: NONE

