

VTM Engineering, PLC

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April 19, 2023

Stormwater Management Section
VT ANR/Water Quality Division
1 National Life Drive, Main 2
Montpelier, VT 05620-3522

RE: Town of Bristol Fire Station
Authorization to Discharge Permit No. 7468-9015.T

This letter and supporting documentation represent the 2023 Bristol Fire Station Annual Stormwater Inspection Report as required by the above referenced Permit.

Stormwater Treatment System Design

The stormwater treatment system is located behind the Fire Station and consists primarily of a pre-treatment forebay and infiltration basin. Runoff from the Fire Station rooftop is transmitted via stormwater piping directly to the infiltration basin. Runoff from the parking lot and driveway is transmitted to the pre-treatment forebay via sheet flow across a grass lawn area as well as through a grass lined conveyance channel. Stormwater collected in the forebay is primarily absorbed into the ground through infiltration. If during high flow events, stormwater in the forebay reaches a pre-determined height, it is transmitted to the infiltration basin via a stone lined overflow channel. Stormwater that reaches the infiltration basin is also designed to be absorbed through infiltration. If during high flow events, the stormwater level in the infiltration basin reaches a pre-determined height, it is transmitted to a stone lined overflow channel.

Field Inspection

The Annual Inspection criteria outlined in the Authorization to Discharge Permit (permit) requires an inspection be conducted by a qualified professional engineer annually between snow melt and June 15 each year. The annual inspection was performed by Steven Palmer, P.E. of VTM Engineering, PLC (VTM) on April 14, 2023.

Criteria for the inspection for the inspection as outlined in the Permit include:

- Noting any areas of damage, sediment buildup or concern to the stormwater system.
- Noting problem areas and recommending measures to correct current problems and prevent future problems.
- Documentation that the stormwater collection, treatment and control system is being properly operated.

During the field inspection, no areas of erosion or significant sediment buildup were noted in or around the forebay or infiltration basin. No other issues of concern related to the stormwater conveyance or treatment

systems were noted that would necessitate maintenance. Several small areas of grass adjacent to the driveway were noted to have minor damage likely due to slow plowing over the winter months. All areas where damage was noted had been recently raked, seeded and mulched at the time of the inspection. The paved parking lot and driveway areas were also generally clean and free of dirt and debris that might eventually contribute to sediment buildup in the stormwater treatment system. Additionally, VTM personnel reached out to Assistant Bristol Fire Chief Kevin LaRose concerning any problems noted with the stormwater system over the past year. Mr. LaRose stated that there were no noted issues of concern with the stormwater system operation over the past year.

Based on VTM's observations and additional information provided herein, the stormwater system at the Bristol Fire Station appears to be functioning as designed. Further maintenance of the stormwater system is not required at this time.

Please feel free to contact me if you have any questions.

Sincerely,
VTM Engineering, PLC

Steven Palmer

Steven L. Palmer, P.E.
President

Attachments:

1. Photographs

Photographs



Grass lined swale along driveway



Recently repaired grass areas along driveway



Forebay



Infiltration Basin #1