



TOWN OF BROOKFIELD

BROOKFIELD, CT 06804

May 22, 2020

John Siclari
Director, Brookfield Water Pollution Control Authority
Brookfield Town Hall
100 Pocono Road
Brookfield, CT 06804

Re: Sanitary sewers for the Dean Road/Pocono Road area between Silvermine Road and Whisconier Road (Route 25)

John:

I am restating the Brookfield Health Department's recommendation to provide sanitary sewers to the referenced neighborhood. Regarding septic systems that serve the homes, this neighborhood has been a concern to me since shortly after I arrived in Brookfield in the spring of 2008. The reason for the recommendation is the same now as it was when I first made it in 2011.

Septic systems function best in well-draining soils and this neighborhood has wetlands type soils and/or soils with high restrictive layers associated with high impervious hardpan layers. These poor-draining soils tend to prohibit leaching fields from emptying well, especially during periods of soil saturation associated with high precipitation and winter snow melt. When the upper layers of the soil where the leaching fields are contained are saturated, these systems are more likely to back-up raw sewage into the homes or bleed effluent onto the lawns. When this occurs septic systems are no longer renovating effluent properly through organic digestion under the ground, but rather presenting public health and environmental concerns as exposure to contaminated waters occurs.

The neighborhood is a low-lying, relatively flat area bordered by the Still River to the west, the railroad tracks to the east, Whisconier Road to the north and Silvermine Road to the south. The neighborhood drains surface and subsurface waters that descend from the eastern heights of the Whisconier Road and Long Meadow Hill Road ridge above it. Waters descending this rise pass through the neighborhood before ultimately draining to the Still River. Flow is generally east to west and southeast to northwest through the residential parcels with 85 homes and individual septic systems. As such during saturation periods, the contaminated septic effluent is less likely to properly renovate through digestion as it more likely dilute through flooding causing potentially higher, harmful bacterial levels in streams through the neighborhood and in the river. Normally, in better draining soils, these bacteria are consumed in natural subsurface digestive processes that occur immediately adjacent the leaching fields. In the interest of examining this likelihood I did some surface water bacterial testing in May of 2012 and though there are no



TOWN OF BROOKFIELD

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Director, Brookfield WPCA
May 22, 2020
Page 2

standards for the results other than an EPA Recreational (swimming) water standard, that standard was exceeded in five of the seven locations tested.

When septic systems in this neighborhood fail, due to the poor septic soils, some repairs will not comply with today's Public Health Code due to the unsuitability of soil conditions for replacement leaching field installation. Soils with less than 18 inches of suitable, naturally-occurring effluent receiving soils are deemed not usable for new home construction today. Repairs in unsuitable soils for existing homes with these soils require exceptions to the Code that are noted on the final repair Permits to Discharge issued at the close of the repair project. These exceptions require a note that warns the owners of excessive water use due to the "non-compliant repair." Most repairs in this neighborhood require significant installations of costly select septic fill (sand) to artificially elevate the leaching systems above the problematic poor draining natural soils below. These septic system leaching field mounds are clearly visible along Pocono Road. Some system repairs require the installation of costly curtain drains to artificially lower excessive subsurface waters that flood a particular leaching field and prevent it from renovating effluent and draining properly.

Please consider the ongoing perceived health and environmental concerns associated with the aging septic systems in the Pocono and Dean Road neighborhood, the challenges of repairing those systems effectively and inexpensively and provide sanitary sewers to the area to eliminate those concerns.

Do not hesitate to call me at the number below with any questions or concerns moving forward.

Sincerely,

Paul Avery, R.S.
Town Sanitarian

cc: Dr. Raymond Sullivan, Brookfield Director of Health
Alice Dew, Brookfield Land Use Director
Nelson Malwitz, Chairman, Brookfield Water Pollution Control Authority