Dear Chairman Smith and Members of the Board of Health:

I wanted to share information with you that I think is relevant to the current proposals for Sheldon West and Sheldon Meadows. I also cc'd the chairs of other boards as I think it is important for all to be aware.

Given the information I have found, I find it very curious that the land in question passed the perc test, especially that at 1139 West St. I would like to hear more about these tests and how the applicant plans to address the current soil situation on these properties beyond trucking in tens of thousands of cubic yards of fill. Covering over a problem doesn't seem prudent. I am gravely concerned that a septic system failure will pose a major health risk to not only the residents of the proposed SLC but to abutters and the city of Pawtucket's water customers.

On a personal note, in the 12+ years I have lived in my home I have had the Department of Public Works: Water Division visit twice to take water samples since 2010. The last visit was November, 2020 when I learned that I was downstream from a place where the sample tested positive for E coli. Thankfully, my water was not contaminated and I am grateful for the Water Division to come and test. However, these experiences illustrate how tenuous our water supply can be. In my opinion, adding more people to an area consisting primarily of wetlands and swamp is a recipe for disaster. AND adding a septic system to a parcel of land that has soil not conducive to supporting septic systems (and I worry even more that this is proposed as a shared septic which has a higher failure rate even in the best of circumstances!) is very concerning to me.

Below is a map taken from the most recent Soil Survey of Norfolk and Suffolk Counties, Massachusetts printed by the U.S. Department of Agriculture. It shows the type of soil found in each area. The boxed area is the 1130 West/20 Hancock properties. Key points on the map are labeled for reference. The three soil types found found in the area are as follows:

Raynham silt loam (Ra)
Scarboro & Birdsall Soils (Sb)
Sudbury fine sandy loam (SuB)

Also below is text from the soil survey mentioned above. Here is the link to where I found this information: Soil Survey of Norfolk/Suffolk County.

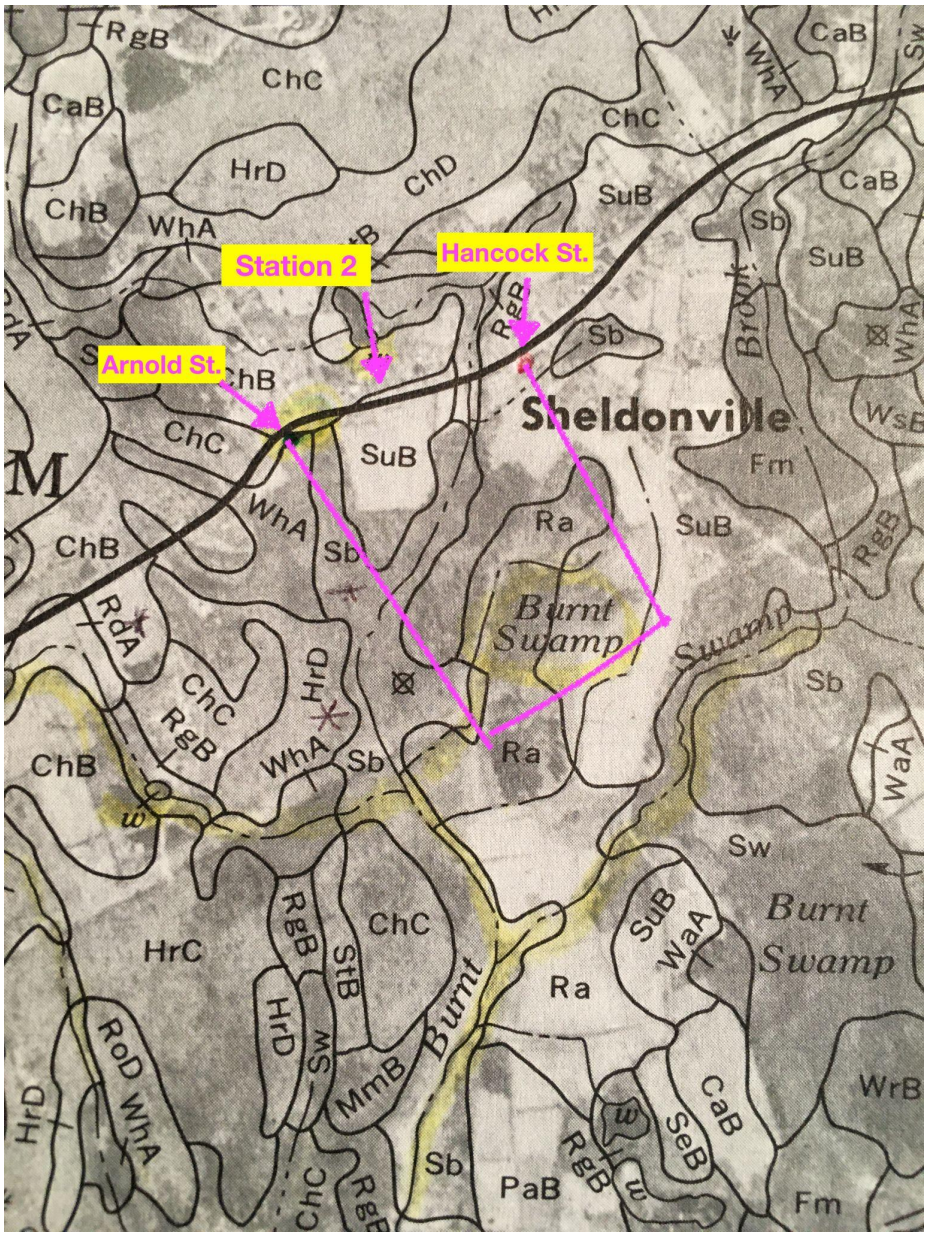
Two of the three clearly state they are not conducive to septic system support. And in the case of the SuB soil, it is in fact a hazard. Granted the applicant is touting that they are bringing in fill to offset this situation but I can't imagine that the soils that are already present will not in some way impact the functioning of a septic system. How could they not? It is unreasonable to think that soils won't mix and mingle and that over time as settling occurs, this proposed septic system won't become a major health hazard.

Thank you for taking the time to read through this information. I apologize for the tiny font on the screenshots of the soil information. The link above will be most helpful.

Sincerely,
Janet M. Sozio
1171 West St.

Cc: Chairman McKnight; Planning Board
Chairman Immonen; Conservation Commission

MAP:



TEXT FROM SOIL SURVEY HANDBOOK

Sb-Scarboro and Birdsall soils. These are deep, nearly level, very poorly drained soils in low, flat areas and in depressions on glacial outwash plains and terraces. Some areas are mostly Scarboro soils, some are mostly Birdsall soils, and some areas consist of both soils. Areas of these soils are irregular in shape and range from 6 to 50 acres. The Scarboro and Birdsall soils were mapped together because they are similar in use and management. The total acreage of this map unit is about 65 percent Scarboro soils, 15 percent Birdsall soils, and 20 percent other soils. Slopes range from 0 to 3 percent.

Typically, the surface layer of the Scarboro soils is black muck about 9 inches thick. The substratum is gray coarse sand to a depth of 60 inches or more. In some areas the substratum has more gravel or more silt.

Typically, the surface layer of the Birdsall soils is very dark gray very fine sandy loam about 8 inches thick. The subsoil is very fine sandy loam about 8 inches thick. It is light olive gray in the upper part and is gray and has faint mottles in the lower part. The substratum is gray, stratified very fine sand and silt to a depth of 60 inches or more. In some areas the substratum is greenish gray.

Included with this unit in mapping are small areas of Swansea soils in landscape positions similar to those of the Scarboro and Birdsall soils, Also included are small areas of Raynham and Walpole soils in slightly higher, convex positions. Included areas make up about 10 percent of the map unit.

- Soil properties:

Permeability: Scarboro soils-Rapid or very rapid; Birdsall soils-Moderately slow.

Available water capacity: Scarboro soils-Low; Birdsall soils-High.

Soil reaction: Scarboro soils-Very strongly acid to moderately acid throughout; Birdsall soils-Very strongly acid to moderately acid throughout.

Depth to bedrock: Scarboro soils-More than 60 inches; Birdsall soils-More than 60 inches.

Depth to the seasonal high water table: Scarboro soils 1 foot above to 1 foot below the surface; Birdsall soils-0 to 1.0 foot.

Hydrologic group: Both Scarboro and Birdsall soils-D.

Most areas of the soils in this unit are woodland. A few areas have been drained and are used for pasture. A few other areas have been filled in and are used as building sites.

These soils are poorly suited to cultivated crops and pasture because of the seasonal high water table and ponding.

Potential productivity for red maple on this soil is moderate. Management concerns are excess soil moisture, high seedling mortality, and the hazard of windthrow. Low soil strength limits the use of equipment to periods when the soils are very dry or frozen. Thinning the stands helps to minimize windthrow if residual stand density is at or slightly above standard stocking levels and if changes in stand density are limited to 30 percent or less. Some areas are suitable for hand-planting of trees.

These soils are generally not suitable for use as sites for buildings and for septic tank absorption fields because of the seasonal high water table and ponding. Soils that are better suited to these uses are generally nearby. Constructing roads on raised, coarse textured base material and providing adequate side ditches and culverts help to prevent the damage to the pavement by the seasonal high water table and potential frost action.

SuB-Sudbury fine sandy loam, 2 to 8 percent slopes. This is a very deep, nearly level and gently sloping, moderately well drained soil in low areas and slight depressions on glacial outwash plains and terraces. Areas of the soil are irregular in shape and range from 6 to 30 acres.

Typically, the surface layer is very dark grayish brown fine sandy loam about 8 inches thick. The subsoil is about 22 inches thick. It is dark brown and dark yellowish brown sandy loam in the upper part and mottled, yellowish brown loamy sand in the lower part. The substratum is mottled, light yellowish brown stratified sand and fine sand to a depth of 60 inches or more.

Included with this soil in mapping are a few small areas of Merrimac and Walpole soils. Merrimac soils are typically in higher convex areas, and Walpole soils are in swales. Also included are areas where more sand is in the surface layer and the subsoil than in the Sudbury soil. Also included are areas that have a finer textured or firm substratum. Also included are areas where some soil horizons have accumulations of iron. Included areas make up about 15 percent of the map unit.

Soil properties:

Permeability: Moderately rapid in the surface layer and the subsoil and rapid in the substratum.
Available water capacity: Moderate.
Soil reaction: Very strongly acid to moderately acid throughout.
Depth to bedrock: More than 60 inches.
Depth to the seasonal high water table: 1.5 to 3.0 feet.
Hydrologic group: B.

Most areas of this soil are woodland. Some areas are used as individual homesites. A few areas are cropland or pastureland.

This soil is well suited to cultivated crops and pasture. The seasonal high water table is the major management concern, and subsurface drains are needed for best production of row crops. Farming on the contour, cover crops, and grasses and legumes in the cropping system help to reduce runoff and to control erosion. Restricted grazing is needed during wet conditions.

Potential productivity for eastern white pine on this soil is high. The soil is easily managed for woodland. Plant competition at regeneration is moderate if conifers are grown. Thinning crowded stands to accepted standard stocking levels allows more vigorous growth. Shelterwood cutting, seed-tree cutting, and clearcutting help to establish natural regeneration or to provide suitable planting sites. Removing or controlling competing vegetation allows best growth of newly established seedlings. Pruning helps to improve the quality of white pine.

Constructing buildings without basements, above the seasonal high water table, helps to protect the interior from damage by the seasonal high water table. Tile drains around foundations and the use of sump pumps in basements help to lower the seasonal high water table. Landscaping designed to drain surface water away from buildings provides added assurance against damage caused by the seasonal high water table. Constructing roads on raised, coarse textured base material and providing adequate side ditches and culverts help to protect the pavement from damage by the seasonal high water table and potential frost action.

The seasonal high water table and rapid permeability are the main limitations of the soil to use as sites for septic tank absorption fields. If the soil is used as sites for septic tank absorption fields, ground water pollution is a hazard. Because of rapid permeability, the soil readily absorbs but does not adequately filter the effluent. Placing distribution lines in a mound of more suitable fill material helps to overcome these limitations.

- This soil is in capability subclass IIe.