

## 10-10-14 Stones and Moans

It's a good day when I am out at a perc test. Or, at least that's what I tell myself. I'm not in the office typing letters with law references, citations of fines or describing the right to a hearing. At perc tests, I am outdoors, with nature, looking at dirt. And that is a lot of fun.

Oh, sure there's the poison ivy and the ticks to watch out for. And I'd better watch where I'm walking because those holes are at least ten feet deep. Then, there's the noisy excavator itself. The driver can't see me. The tracks lift right off the ground when the bucket is struggling with clay or stones and I'd better not be standing too close when that happens, or I'd lose my toes, if not my life. And I learned the hard way that I should not leave my folding chair behind the machine. They crush very easily. I'm just glad I wasn't in it.

Our Massachusetts Department of Environmental Protection (Ma DEP) determines the method of the perc test, which measures the rate at which water percolates down through the soil, giving the engineer the first of several pieces of information required for designing the septic system. The rate of that percolation can range from less than two minutes per inch to sixty minutes per inch. So, you see, some perc tests take little time and others take a lot; sometimes, a real lot.

A thirty minute per inch perc rate means that you'll be standing around for more than three hours. (We watch the water drop from 12 inches, to nine inches, to six inches.) Even with several holes being dug at the same time to make good use of our excavator's time, some holes for observation and evaluation and others for additional nearby perc tests, it still leaves a lot of time for musing on our surroundings. It's fun to identify all the plants within sight, for some indicate the kinds of soils below. Mostly pines might indicate sands, or, as we say, "Where there's beech, there's boulders". It's also useful to observe indications of animals. My soil evaluator saying is, "Woodchucks aren't fools. They dig where it's easy to dig." Then I ask the owner, "Do you have any woodchuck holes on your property?"

The land I visited recently for perc tests was farming land for hundreds of years. It sits on flat land, ice contact outwash, just down the street from a small drumlin, formed by our last glacial period 10 to 20 thousand years ago. Those high points, the drumlins, the kames, moraines and terraces are especially interesting when it comes to soil evaluation. These land formations fell into place as glaciers advanced and retreated, dumping sediments of silt, clay, sands, stones and boulders. Other areas are filled with silt, the fines that can follow a slow melt out, compared to rushing torrents required to carry the stones and boulders. Since this particular combination of soils does not drain quickly, it can be ideal for farming without the need for irrigation.

These glacial till and ice contact areas must have been the bane of the settlers, though, as it would be impossible to run a plow through it until the rocks had been removed. As I looked around last week, while timing our slow perc tests in areas of silt loam and till, I would look up and see the forest lined with stone walls. The shape of the stones tell a story, also, as they were angular and sub angular, having been dragged and scraped by the massive glaciers, resulting in rocks that were just right for stacking, allowing gravity and friction to hold them there for hundreds of years.

The past spoke in other ways, quietly, with few discoveries of past lives, now mostly hidden under the leaves and thick underbrush. In the wake of the excavator, I found a pile of thick glass shards and a curved piece of iron, perhaps from an old vehicle, before the invention of safety glass. They were a reminder that land is always in flux; we are here briefly. Our transitory contact with the land changes it, just as others changed it in the past. What was once a field for growing food, is now forest and may be cleared again, for what purpose I am uncertain. Of one thing I am certain: it is now far easier to change the land quickly because machinery allows us to do so. Those beautiful stone walls I saw that day were hauled by lever and fulcrum, sweat and muscle and, perhaps an ox, if they were that fortunate.

At the end of the day, the stones, the birds and trees allowed me a brief respite from office work. An unsuccessful perc test but the indication of better soils elsewhere on the land, succeeding on another day, will raise the hopes for some but also regret and sadness for others. It is not up to me to decide the use of the land, I am there to witness the activity. In this case, it is up to the town of Plympton to decide what to with this land, since it is town owned property. What is best for the town? Open space? Developed land? Proceeds from the sale? I don't have the answer but I know it is worth taking the time to ponder and to consider the long range view, for we are here briefly.

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