

The Safety of Beach Water 101

I admit it. Some things Health Agents have to do are kind of fun; like wearing thigh high waders into the ponds, listening to red winged blackbirds and scooping up samples of pond water. While most people are taking their coolers out of storage this time of year in preparation for picnics, health agents are gearing up for lab work. We wouldn't want our dead birds or beach water samples to get heated up, now would we?

Although I did get my first dead bird call (to be tested for West Nile virus) last week, thus breaking in the old cooler, Memorial Day is always followed by my first samplings of beach water. This sampling is one of many State mandated activities put in place to ensure the safety of the public. As with so many State mandates, it is not funded at the State level. The testing of the beach waters in Halifax is funded by our small budget. There is one exception to this. Halifax has two private beach associations. They pay for the testing of their beach's water for the summer season. As their health agent, I collect the sample for free and their fee pays for the lab work.

Funding concerns aside, making sure the water is safe is an admiral goal. Before such mandates for water testing existed, children often became sick after visiting the beach. We used to accept such occurrences as ear infections and occasional dysentery as part of summer, without knowing exactly why.

Each Tuesday morning, I will collect samples of beach water in clean bottles similar to those used for urine samples. The samples will be kept in a closed cooler on ice for the duration of my ride around town and back in the office until the courier from G & L Labs picks them up.

Accompanying the water samples is the paper work called the Chain of Custody. That was one of so many terms I found so strange sounding when I started as the health agent. Now, it makes perfect sense to me. The paper describes what I am passing along, where it came from, what size and type of container holds the samples, exactly what time I collected them and the time I completed the work. My signature testifies to my statements and holds me responsible for the truth of them. The courier also signs this paper with a date and time of pick up. A carbon copy is left with me. The "chain" continues to the lab. At all times and through all hands, whoever has "custody" of the sample is documented. At no point is there to be a break in the chain of custody. It is the legal and scientific way to ensure accountability.

My chain of custody paper states the samples are of fresh water and they will be tested for one thing only, as required by State law. They will be tested for E. coli. The presence of E. coli could indicate the proximity of a septic system leaking into the pond. There are other sources of this bacteria, though. It could indicate the presence of animal fecal matter, for instance. Sometimes, there is a high count of E. coli right after a heavy rain. Under these circumstances, the catch-basins which have been collecting garbage, organic matter, and street run off and baking under warm temperatures, suddenly are flushed out. A plume will form, sometimes ten feet into the pond, and that plume can be full of bacteria. I am supposed to collect the sample from "the worst case scenario" and, so, after a heavy rain, I collect from the area of these plumes.

Along with the chain of custody, I also fill out a field data report. The State wants to know the weather, the air and water temperatures and other field conditions such as number of swimmers, presence of trash, weeds and algae. Any of these conditions could

also affect the lab results and the information also paints a picture as to the overall condition of our beaches. It makes me sad every time I have to write “trash”. I will never understand the mentality that enjoys the beach and then trashes it. The most frequent find is piles of Bud Light, Marlboro boxes, bait containers and sometimes I find whole bags of trash stuffed into the bushes. Amazing.

I receive a fax from the lab about thirty-six hours after the samples leave my office. That fax is quickly flowed up by hard copies. When the levels of E. coli are unacceptably high, a sign is posted closing the beach until the testing indicates a once again acceptable level. With the help of our Highway Department, the sign is up and comes down very quickly, as needed.

Last year, in 2006, it was not necessary to post any beach closings in Halifax. I hope this year is as good. While waiting for those results, I get to wear my waders and watch nature for one morning each week. I am fortunate, indeed.

Cathleen Drinan is the Health Agent for the Town of Halifax. She and the Board of Health welcome your comments and suggestions for this column. She can be reached at 781 293 6768 or at cdrinan@town.halifax.ma.us