

Date: Thu, 22 Jun 2006 17:57:24 -0400

To: Greg Page, "Vince Wheatley", "Turner, Maureen", "Strott-Wheatley, Pat", "Smith, Brain", "Millar, Heather", "Lee, Ralph", "Kemp, Dave & Lori", "Hornor, Sally", "Horner, Sally", "Campbell, Margie & Mike", "Busch, William", "Bob Bates", Wolfgang Harbauer, richard Brockson, Debbie Martinez, Joe Vorgetts, Melissa Wilson, Nicci DeAngelo, Vern Martinez, Hayo Catherine A, Karl Easthom, Julie Thompson, jennie boden, PWood@capitalgazette.com, Tom Dent

From: Juliet Page <juliet@julietpage.com>

Subject: Bacteria Filled Mill Creek

Cc: "Cathy Vitale", "Kerry Topovski", "Pam Jordan", "Michael Bonk", "Ronald Bowen", "Vickie Hamilton", "Keith Tate", Chris Phipps

Hi All,

I thought I'd send you all an e-mail summarizing a very detailed conversation I had with Keith Tate at Bayland. He phoned me at the request of DPW to discuss some of the issues and questions I'd raised recently about the high bacterial levels in Mill Creek and why Dividing Creek doesn't have the same bacterial problems. The program manager for the Mill Creek project at Bayland, Dwayne Wilding is out of the country. I thought it only fair to keep you all in the loop with the information I learned from Bayland.

- Keith said that the studies that Bayland is doing on Mill Creek are not related or intended to be connected to those bacterial measurements that the AACo health department is making. My point was that they are on the same body of water therefore they have to be related ecologically, even if not politically or financial. Also with no formal feedback from Bayland or DPW as to any results from the Bayland study, naturally we the homeowners and concerned citizens in the Mill Creek area are drawing conclusions based ONLY on the health department measurements - since there is no other data we can even consider!

- The research Bayland is doing is attempting to determine trends in Mill Creek's health. They are working closely with Magothy River Association. The study is trying to get an assessment of the health of the river and understand if there are any long term impacts. Their scientific definition of long term is an impact one year after the event.

- Keith indicated that Bayland has a long term relationship on other environmental projects for AA county. He's also said that in Bayland's history working with Ron Bowen at the DPW they have always found him to be someone who always "makes good on his words." Bayland indicated to me that they believed that DPW was dedicated to restoring the health of Mill Creek environmentally. Maybe Ron Bowen can also issue some sort of formal statement on the part of AA County indicating that is indeed the case. :)

On the subject of testing details, here's some information that I understood from our discussion:

- Dividing is considered by Bayland to be an excellent 'control' river for comparison with Mill Creek. I believe we all understand and agree with that rationale (orientation, flow, proximity, local terrain, similar runoff, homesites etc...) Heck the bunnies eating my garden and pooping in the street are probably the same darn rabbits that are polluting Dividing Creek since it's only a few blocks away. ;-)

- There have been very few studies performed on headwaters of rivers in this area. Not very much is understood about the ecosystem, the tidal action, the sedimentary behavior, the bacterial issues etc... That's why they are studying Dividing Creek as well as Mill Creek. That's also why the scientists aren't able to quickly answer all the questions we keep asking them, and no doubt will continue to keep

asking! They haven't studied the ecosystem enough to answer even a lot of what I consider to be pretty basic questions - like why does Mill Creek have elevated bacteria but not Dividing Creek?

- There were 17 - 20 core samples taken from the river, up in the headlands, in the dredged areas and also in regions outside of the channel where dredging did not occur. I not certain, but I think that they took some from Dividing Creek also. These were sent in to the lab for analysis and they are expecting results soon. The purpose of the core samples is to look for areas of deposition - to see what has been historically layered in the river bottom - by historically they're looking deep enough so that it's back to before DPW had a sewer line and before the recent 'human' impact affected Mill Creek. They're not just looking for residue from the sediment from the sewage spills, but also how events impacted what might have been on the bottom and changed ammonia, nitrate and nitrite levels and so forth. Sally and the other scientists will have to explain exactly how that is done, because I haven't a clue. :o)

- Bayland did some early models of the river to determine how many days it takes to fully flush out the water in Mill Creek. Personally I'd be really interested in seeing a report on how they did this and seeing the detailed results - but anyways, the conclusion was that it takes about 7 days for the natural tidal action to flush Mill Creek.

- Bacterial Samples - I know the testing isn't intended to be compared, but here I go again. It's the same river and the same bacterial colonies that are being measured. Bayland is also sampling for enterococci. They are using a different lab technique than the AA County health department. Bayland will have to explain the technical differences in the testing. One primary difference is the sampling technique. AA Co does 3 samples per site and then gets an average value - the turn around time for that testing is 2-3 days and the tests are quite expensive. Currently the county is measuring weekly, although today's e-mail notification indicated that they took an additional set of samples today at the Mill Creek sites. Bayland is doing single samples at each location, the turn around time is over 2 weeks and the cost is less, but there are more frequent samples and a much larger number of sample sites involved both on Mill Creek and on Dividing Creek. When it's all said and done the Bayland measurements will provide thousands of data points, whereas the AA Co measurements will be in the hundreds. The other thing that Keith pointed out to me is the variability in the sampling. Apparently the levels for bacteria go up and down dramatically over the course of a day and a week. Plus according to Keith, if you sample a few feet away and happen to be near seagull poop then the levels skyrocket. That's part of the reason for the county's 3 sample method. The huge number of samples Bayland is taking is intended to give good mean and standard deviation results, not just single point in time results since some of the parameters they're measuring *may* vary dramatically. They don't know in many cases since not much data has been taken in river headwaters before.

- Stagnant Water - We all have read what looks like standard boilerplate reasons given by AA Co for the escalating bacterial levels: runoff, stagnant water, temperature etc... Several of us homeowners on the river have commented that the tidal action has been pretty normal of late (a few days ago there were some pretty low tides) but the river at my dock (across from Haskell Rd) has NOT be stagnant in my perspective. Well it turns out that stagnant is a scientific term and AA Co was using it that way. Keith explained that much of the measurement protocol and bacterial limits for safe swimming have been developed over decades of measurements at swimming access beaches which are generally on larger bodies of water which experience much more flow than Mill Creek. He compared Mill Creek's 7 day refresh time to some of the larger beaches on the Bay and larger rivers, such as Sandy Point beach. OK, from that perspective I can see how Mill Creek might seem more stagnant than Sandy Point. I believed I told Keith that I now better understand the use of that terminology, however since the tidal action in Mill Creek hasn't been noticeably different (ie no more 'stagnant' than usual), one shouldn't cite that as a potential reason for the elevated bacterial levels.

- Dredging - I know many of us have been upset because they only removed the sewage / sediment / sand / whatever on the land and not in the river. This has been a MAJOR ISSUE in the eyes of the

homeowners. Environmentally dredging the entire river headwaters from shore to shore might do far more damage to the ecosystem. The solution scientifically isn't obvious. That's the reason behind the 'one year' study of Mill Creek. I guess it's sort of like the doctor's mantra to first do no harm. In my mind, AA County never addressed our dredging questions or gave us any scientific explanation why that might be BAD for the river. This was the first I heard a plausible explanation why it might be harmful to the Mill Creek ecosystem. Perhaps Sally or someone from Bayland can give some explanation of the ecosystem in the headwaters so we can better understand the dredging impacts and their hesitancy to jump into immediate dredging everything (other than to quiet us homeowners!) <vbewg>

- Magothy River Association - I hadn't realized just how involved they were in this process of designing the study. I personally blame myself for not being as proactive as I should be with MRA, but the meetings are always on Wednesdays, which is Sailing Race nights! :o) DCHOA is a member of MRA and I hope the rest of you will join too.

- Keith also informed me that there are some new EPA guidelines for waterway levels on pollutants coming out. Keith - please send me the links to those as we discussed. There's some new "Total Daily Maximum Loads" TMDL standard the EPA is working on which will provide recommendations for major waterways (Magothy is considered major, Mill Creek is not BTW). I'm not sure of the status of this or how it fits in but it could be a source of additional understanding on how much pollution the EPA thinks is OK Whatever that means! and we'll save that can to be opened after we've all looked it over OK? :o)

I think Keith and I had a very productive phone call. Keith, please feel free to send out any corrections to the group if I misunderstood or misquoted anything or missed any points.

What I hope Keith got is an understanding that in my opinion one of the primary sources of frustration on the homeowner's side is a complete lack of information and communication with DPW and AA Co (and Bayland also) on the subject. I stated several times that my biggest fear was that the problem would be 'studied' for a year and then shoved under the rug and ignored by AA Co. If the County could give us more frequent updates on what's going on, and if Bayland could at least keep us updated as to their progress, even if the results aren't in yet that would go a long way toward building the trust of the homeowners in the County.

I was certainly encouraged by Bayland's opinion of AA Co DPW and (in Bayland's opinion) DPW's commitment to restoring the health of Mill Creek. Call me a skeptic, pessimist, distrusting of Government or whatever, but I need to hear *from Anne Arundel County Officials* that AA County is indeed dedicated to restoring Mill Creek and will take the appropriate environmental cleanup action. That's something that I do want to believe, but unfortunately I'm personally not quite there yet, though after my discussion with Keith I'm definitely closer. I hope AA Co works towards restoring the creek, and also the trust of the local citizens. More frequent communication is a big part of the solution.

Sincerely,
Juliet Page

...overlooking (still closed) bacteria filled Mill Creek
Homeowner and Board member, Divinity Cove Homeowner's Association