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OPINION – Proposed Southern Kent Island Sewer Collection Extension

Summary

Midshore Riverkeeper Conservancy (MRC) is an independent non-profit river protection program with over 1,500 dues paying members and families. Our mission is to restore and protect the waterways of the midshore which includes Eastern Bay and the Miles and Wye Rivers. We have nine employees on staff including three scientists and two attorneys. We also have scientists on our board.

Queen Anne's County has developed a proposal to provide a sewer extension running south on Kent Island in order to address over a thousand failing septic systems, accompanied by a lot consolidation ordinance which is designed to permanently reduce the number of buildable lots along the line's path from approximately 1,600 to approximately 658. The County cites historic evidence that no more than 85% or 560 lots will ultimately develop. We have undertaken a review of this project and are prepared to provide objective comment on its environmental impact.

Before reaching our conclusions, Jeff Horstman, our Miles-Wye Riverkeeper, spent over forty hours researching the facts and discussing the projects with both those in favor of it and those opposed to it. We have spoken at length to the lawyers representing the county who are working on the consolidation ordinance and working on the Bay Restoration Fund grant. We have reviewed independent reports concerning the degree of failing septic systems in the area and assessed the environmental impact of this project. We have discussed the findings with our staff scientists and members of our board.

It is the view of MRC that if the county can effectively limit the number of developable lots to the approximate 600 that it has committed to, and provide a sewer line to the thousand plus failing septic systems, it will effectively reduce net nitrogen inputs into waterways by somewhere between 17,000 and 22,000 pounds per year while simultaneously removing significant pathogens from ground water.

We have reviewed the consolidation ordinance and the Bay Restoration Funding requirements, and the legal analysis conducted by the counties outside counsel, and believe that the plan will, in fact, effectively limit growth to the approximate 560 lots. (See attached Venable legal opinion.)



MRC believes that this project will lead to positive long-term improvements in water quality. It will move the county significantly forward in meeting its TMDL obligations. In our view the project is a progressive and reasonable solution to the failing septic systems in southern Kent Island. We support it.

Extract

Southern Kent Island (SKI) is currently serviced by individual residential septic systems. As far back as the early 1990's it has been part of the county's plan to hook these old systems on small lots to a wastewater treatment plant. Based on an independent inspection in 2004 it was determined that over 50% of these systems were failing at that time*1. Based on a current geographical representation only 20% of the area on Southern Kent Island would have the required ground water clearance to not have a regulatory failing septic system. Many of the small lots do not have reserve septic fields. The bay is rising. As explained below, between 60 to 80% of the septic systems on southern Kent Island are failing.

- The total affected septic systems are 1,518 of which 940 are in "critical area".
- The southern Kent Island sewer collection systems will hook up 1,518 of the existing septic systems; of those, approximately 1,214 are leaching into ground water *2
- A fully functional non failing septic for a 4 person house releases nitrogen at approximately 25 to 40 mg/liter based on current systems on Kent Island *3
- The existing waste water treatment plant with Enhanced Nutrient Removal (ENR) will produce an effluent of 2 to 3 mg/liter representing an 88% to 92% reduction of nitrogen going into our ground water
- When the project is complete, an estimate of 22,000 lbs of nitrogen per year will be removed from our rivers and bays.*4 These 1,518 households will move from emitting a septic effluent of 25 to 40 mg/liter of nitrogen (or worse if they are failing) to an septic effluent of 2 to 3 mg/liter of nitrogen

The county contends the 658 lots proposed to be available for development over the next decade are needed for this project to be legally defensible and economically viable.. Even with this gradual increase in homes, however, the net nitrogen reductions are dramatic. Moreover, the lot consolidation process will eliminate the possibility of 1600 additional home sites being developed, utilizing inefficient individual septic treatments.

Limiting potential growth and hooking all current septic systems as well as those consolidated 560 lots over time through a STEP system to the extended pipeline is a good option for long-term water quality. Waiting for newer BAT technology that is not currently approved by MDE and leaving 1,518 existing septic systems to leech for an extended period is not a good option for water quality. (Even the best available BAT septic systems emit between 14 and 27 mg/liter of nitrogen * 5 significantly more than the proposed "ENR" wastewater treatment option.)

MRC believes that from an environmental perspective, this project is long overdue, important, and a significant positive step for improving water quality in our rivers and bays. We strive to objectively put the health, protection and restoration of our waterways first. This project is not perfect. It is a compromise. But in our view it will provide the community with profound environmental benefits with minimal risk of being undermined by future policy changes.

Analysis

MRC strongly supports the Bay TMDL program and we support removing nutrients from entering our rivers and bays. The amount of nitrogen and pathogens that can be removed using the proposed sewer collection system compels us to support the project. Growth can be limited to 568 new homes, rather than the 1,600 potential new homes on platted lots. The net result of bringing the 1518 (mostly failing) septic systems onto the sewer line, even factoring in the hook-ups and stormwater flows off of the proposed 580 new homes to be developed over ten years, is a nitrogen reduction of 17,000 – 22,000 pounds every year. This would be a major positive advancement in reaching TMDL goals.

If this project is not done, in our view, QAC will have to pay in other ways to reach these goals, and the cost to taxpayers could be substantial.

Some have denied that there are so many failing septic systems. This is simply incorrect. There are three definitions of a failing system. 1) A homeowner may recognize that a system is obviously failing if there is visible back up or bubbling and stench. 2) A hydraulic failure occurs when you have ground water penetration of the system. This flushes waste directly into groundwater and receiving waters. 3) A state regulatory failure occurs when you do not have 2 feet of ground space between seasonal high water and the system. Again this leads to periodic flushing of the waste by groundwater.

It is fact that a majority of the systems on SKI have a hydraulic or regulatory failure. Independent studies have verified these failings (Rubin Report) and concluded that a sewer line is the only viable and best solution. In a meeting with Mr. John Nickerson, QA Dept. of Health, we reviewed another study in 2004 that illustrated through random sampling inspections of a significant number of septic systems, that 53 % were failing. That was ten years ago. As we all know the island is sinking and the water is rising.

Only 20% of the land in the affected area has the necessary 2 feet of soil between the septic system and the groundwater, a regulatory requirement for an acceptable septic system. Queen Anne's County already reduced the required distance from 4 feet to 2 feet to accommodate these systems. MRC has researched different BAT systems but they are not a viable solution. The best BAT systems clean the effluent to about 15 to 25 mg/liter of effluent, where the WWTP will clean to 2 to 3 mg/liter of effluent and remove the pathogens. Septic systems are not as efficient and do not remove pathogens, which is a long-term human health issue.

Some have suggested “new technologies” will become available to allow effective waste treatment notwithstanding the high groundwater. We have reviewed other non MDE approved septic systems but they are not appropriate for a number of reasons. And if such technologies did come available, what is to stop a pro-development council from approving them for use on all 1,600 homes? If the county were to try to force them on the 1,300+ failing system homeowners, then it is reasonably likely that the full 1,600 lots, instead of a controlled 560 would also become available for build-out.

Tom Leigh, the prior Miles-Wye Riverkeeper, strongly supports this project.

This project will remove a net 17,000 to 22,000 lbs. of nitrogen annually, significantly advancing the TMDL goals. It will limit development to 560 homes. We have studied the legal and political

risks analyzing whether this development cap could be undone in future years and conclude it is extremely unlikely. (See legal opinion attached.) Moreover if the county tried to undo it in future years, organizations like MRC could sue to enforce it.

Consequently, MRC supports this project and encourages the citizens of Queen Anne's County to do so as well.

Jeff Horstman, Miles-Wye Riverkeeper
Tim Junkin, Executive Director

1. Accurate Environmental Consulting Report July 8, 2004, QAC Dept. of Health
2. Dr. Rubin report page 11
3. Governor's Bay Cabinet meeting 4/9/13
4. MAST – Governor's Bay Cabinet Report
5. http://www.mde.state.md.us/programs/Water/BayRestorationFund/OnsiteDisposalSystems/Pages/water/cbwrf/osds/brf_bat.aspx