



July 26, 2017

TO: Members, House Environment and Transportation Committee
BAT Septic System Workgroup

FROM: Maryland Association of Counties
and Maryland Conference of Local Environmental Health Directors

RE: Testimony on Septic Systems and Nitrogen Pollution

The Maryland Association of Counties (MACo) and the Maryland Conference of Local Environmental Health Directors (Conference) thank the Workgroup for the opportunity to testify today. We offer the following four comments regarding the use of best available technology for nitrogen removal (BAT) septic systems and other issues related to existing septic systems and nitrogen.

1. Mandatory Expansion of BAT Septic Systems Beyond the Critical Area

BAT septic systems can reduce nitrogen emissions over conventional septic systems, but the amount of reduction is contingent on the local hydrologic and geologic conditions where the BAT system is being installed. The usage of BAT systems makes sense within the Chesapeake and Atlantic Coastal Bays Critical Area and for specific sites determined by the county or health department to require BAT.

However, MACo and the Conference oppose any mandatory expansion of BAT septic systems beyond the critical area. A broad-based BAT septic system mandate is not: (1) supported by science; (2) cost-effective; and (3) necessarily the best method to address local water quality and the small amount of nitrogen that BAT systems would allegedly reduce.¹

There is no comprehensive scientific study that shows BAT systems will reduce nitrogen in every location in Maryland. In fact, the most recent soil attenuation studies for both the United States Environmental Protection Agency (EPA) and the United States Geological Survey have shown that under certain geologic and hydrogeologic conditions, significant nitrogen attenuation (reduction) can be achieved without the use of BAT systems.²

¹ See MACo testimony on HB 281/SB 266 of 2017.

² See *generally* Nutrient Attenuation in Chesapeake Bay Watershed Onsite Wastewater Treatment Systems – Final Report by Victor D’Amato, PE (August, 2016) and Reducing Nutrient Loading from Onsite Wastewater Systems presentation by Victor D’Amato (2015).

According to the Maryland Department of the Environment (MDE), the removal of the BAT septic system requirement beyond the Chesapeake Bay and Atlantic Coastal Bays Critical Area will result in only a modest increase in nitrogen from these systems, in the context of the overall Chesapeake Bay Total Maximum Daily Load (TMDL). Although the current EPA model indicates septic systems account for only 6% of the total nitrogen load for the entire Bay watershed and only 8% for Maryland specifically, the most recent studies previously mentioned suggest the actual impacts may be much less. It is clear that the nitrogen reduction that will be generated based on the costs required to install (and maintain) BAT systems in all locations throughout Maryland is neither efficient nor cost-effective.

While counties and local health departments should continue to have the authority to require BAT systems on a case-by-case basis, other more cost-effective nitrogen reduction solutions should be available to counties to address local nitrogen goals for septic systems. MACo has consistently argued for local flexibility since its first comments to the EPA and MDE on the proposed Bay TMDL.³

2. Enforcement and Incentives for BAT Septic System Maintenance and Repairs

MACo and the Conference note that even where BAT systems are shown to be beneficial for nitrogen reduction, the justification for requiring their use is predicated on the assumption that these systems will be functioning as designed. Like all mechanical systems, BATs must be regularly inspected and maintained to ensure that they are working properly and to optimize the life of the entire system.

It is important to understand that BATs are very often used in conjunction with a disposal system that is classified as “non-conventional.” This usually means that the site is limited by poorly draining soils, shallow water table, close proximity of a water body and/or shallow bedrock. Therefore, it becomes even more important for BATs associated with these properties to have their systems regularly inspected and maintained.

Currently, the State requires property owners ensure that BATs are serviced by a certified service provider at least once every year. Previous regulations required BAT manufacturers to include five years of operation and maintenance (O&M) with the installation price. MDE’s most recent regulations require BAT manufacturers to include only two years of O&M with the installation price.

Despite the requirement for property owners to sign and record a maintenance agreement in land records for their BATs, it has been the Conference’s experience at the local level that many property owners claim to be unaware of the O&M requirements and in some cases are reluctant or unwilling to pay for annual inspections and repairs not covered by the initial warranty.

Since the BAT program was initiated in 2007, there have been over 12,000 BATs installed throughout Maryland, including approximately 3,000 non-BRF funded BATs installed in 2013-16 when they were required for all new construction.⁴ Approximately 50% of these systems are installed in the critical

³ See MACo letter to EPA Water Docket (November 8, 2010) and MACo letter to MDE (November 8, 2010).

⁴ According to MDE, there have been 12,485 BAT systems installed in Maryland as of July 1, 2017. The top five counties for BAT installation include: (1) Anne Arundel – 2,176; (2) Calvert – 1,089; (3) St. Mary’s – 891; (4) Somerset – 791; and (5) Queen Anne’s – 748.

area. Currently, there are approximately 1,500 systems (approximately 15%) that are out of compliance statewide, with a large number of systems that will be coming out of their warranty period over the next 2-3 years.

Beginning in 2015, the Maryland Department of the Environment offered grant funding to counties willing to handle tracking and enforcement of O&M for BATs. Nine of the 23 counties agreed to take on the tracking and enforcement tasks. Three counties agreed to take on the O&M tracking only, while the remaining 11 counties opted to let MDE handle these responsibilities.

At the local level, it was our understanding that MDE (and the Attorney General's Office) would be assisting counties in getting compliance for those property owners who refused to comply with the official notifications. The existing regulations classify the failure to comply with the O&M requirements as a misdemeanor (a criminal offense) which would require filing with the District Court. However, we have since learned that given the nature of the offence, the Attorney General's office has no intention of proceeding with enforcement of these O&M violations.

While the existing regulations specifically allow local jurisdictions to enact local enforcement regulations for BATs, it would be extremely difficult from both a cost and implementation standpoint for most counties and local health departments to track and enforce O&M requirements.

Both MACo and the Conference would oppose any mandatory O&M inspection or enforcement requirements placed on county governments. However, MACo and the Conference could potentially support statutory or regulatory changes that would incentivize O&M compliance or streamline the enforcement process. An optional property tax credit for compliant BAT systems could help with enforcement. Providing for a simple fine in lieu of a criminal misdemeanor could also potentially resolve compliance issues.

Regardless, careful consideration should be given to the human resources required to track and manage such a program, whether it is at the state or local level. Many local environmental health programs are not staffed or prepared to take on such responsibilities. Those that are willing to take on O&M enforcement can only do so if there is a fair and reliable source of compensation for their efforts.

3. Connecting Houses With Septic Systems to Public Sewer

MACo and the Conference support having greater flexibility to use Bay Restoration Fund (BRF) monies to connect properties with septic systems to public sewer where practicable. Many counties have utilized or considered utilizing BRF monies for this purpose and the environmental and public health benefits are substantial.

However, these connections involve significant administrative time for multiple staff members across county and state departments. Associated activities include planning actions for water and sewer plan amendments, local legislative actions on sewer petitions, meetings with property owners and community associations, and project reports for state officials. Additionally, project costs will vary widely based on geographic region and whether the affected properties require a simple connection or a line extension.

Large connection projects can only be funded by multi-year BRF grant commitments. Some might be the length of a 15- or 20-year loan for the connection or extension project. MACo and the Conference ask the Workgroup to consider increasing the current BRF caps on connection projects.

4. Further Study Regarding Effectiveness of BAT Septic Systems and Staffing Needs

Finally, MACo and the Conference believe further study is needed into the effectiveness of BAT septic systems and program staffing needs in Maryland.

Currently, BAT performance is largely based on modeling and assumptions rather than actual data. Further research is needed regarding the effects of soil attenuation on nitrogen transmission, nitrogen attenuation by structures such as reservoirs, and the effectiveness of non-BAT technologies such as sand mound systems versus older “traditional” systems. Additionally, the approval of different BAT technologies for use in Maryland was based on the technology meeting certain requirements under test conditions or for a limited duration of 12 months. But how is a BAT unit installed five or ten years ago functioning now? There is little available data and an audit on such systems would be helpful in determining whether reality comports with the theoretical projections.

Another aspect of study would be to determine the resources required to adequately enforce this program. State support for local health departments was cut dramatically during the great recession, and still remains some \$30 million below historic levels. Based on Maryland Department of Health audits, it is known that most local health departments are understaffed for the proper enforcement of health programs such as restaurant inspections. Although there is no analogous MDE audit, the Conference believes that most local health departments face similar funding and staffing challenges for their environmental health programs. MDE is also struggling to keep their BAT and BRF programs staffed for a variety of reasons.

A successful BAT septic program needs infrastructure, staffing, and reasonable incentives/sanctions to encourage compliance. What would it realistically take to stay on top of the septic BAT program? Answers to this question might be learned by identifying and then studying other jurisdictions that are successfully addressing this issue.⁵

Conclusion

MACo and the Conference believe that policy decisions regarding BAT usage should be based on both practical results and cost effectiveness. Providing flexible tools for counties to meet their septic system sector nitrogen reduction requirements rather than imposing

“one-size-fits-all” mandates will maximize Maryland’s chances of meeting its Chesapeake Bay restoration goals. If you have any further questions, please contact MACo Legal and Policy Counsel Les Knapp (lknapp@mdcounties.org / 410.269.0043) or Conference President Kevin Koepenick (kkoepenick@baltimorecountymd.gov / 410.887.2762).

⁵ Barnstable County, Massachusetts, offers one such perspective. The County developed a tracking system to manage septic systems within the Cape Cod area. See Barnstable County Department of Health and Environment Database Management Program For Innovative/Alternative On-Site Sewage Treatment Systems by Susan Rask, George Heufelder, Holly Everson, and Christopher Burt.