

UPGRADING SEPTIC SYSTEMS IN AA COUNTY

By Sally Hornor

In Anne Arundel County and southern Md, there are two major sources of nutrients that flow into our rivers and into the Chesapeake Bay: stormwater and domestic wastewater. Anne Arundel County has done an admirable job in reducing the amount of nitrogen (N) that leaves wastewater treatment plants. They are also spending a lot of time and money trying to reduce the flow of stormwater, but our septic systems, or onsite sewage disposal systems (OSDS), are still a major source of nutrients, especially N. In fact, there are over 40,000 OSDS in the County and all of them leach N into surrounding soil. The closer the system is to the nearest waterway, either a tidal stream or river or the Bay, the more N it releases as there is less soil and plant growth to take up the N before it reaches the Bay.

To help meet its required nutrient reduction limits as set by the EPA Total Maximum Daily Loads (TMDL), AA County is trying to figure out how to reduce the input from OSDS. If a sufficient number of systems can be removed and the households hooked up to County sewer, the necessary reductions could be made. The problem with this plan is the cost: each system that is converted from septic to sewer will cost about \$60,000. Since about half of the OSDS in the County are in the Critical Area, being within 1000 feet of the water, conversion of just those 20,000 units would cost about \$1.5 billion.

This is the dilemma that was presented to the newly formed AA County Septic Task Force in 2017. Two CEPA trustees, myself and Lloyd Lewis, were asked to serve on this committee along with ten other County residents and a dozen County staff members. We met about 20 times over the following two years to see if we could come up with a solution that would allow the County to meet its TMDL and Watershed Implementation Plan (WIP) goals while still being affordable. While an earlier WIP (WIP II) required converting 20,000 OSDS, the 2019 WIP III called for only 5000 to 6000 systems to be converted, reducing the cost by 50%. This reduction in the number of required conversions was primarily due to the improved performance at County Wastewater Treatment Plants with respect to the reduction of nitrogen from sewage. Additionally, the earlier WIP called for the conversions to be done by 2025 while the new WIP gives us until 2050. Other ways that the County can reduce nutrients include less expensive ways such as minor system upgrades and the use of Managed Aquifer Discharge (MAR). MAR was the key topic of our CEPA Forum in 2019 (see our website for individual presentations) and was described in the winter 2018-2019 CEPA newsletter which is also posted. Although an EPA official has recently stated that meeting the TMDL goals is not enforceable, County Executive Pittman has stated that we will continue to work toward these goals.

The 5000-6000 OSDS that are to be converted by 2050 include those that the County Health Dept. has determined to be public health risks. These systems are grouped into Onsite Wastewater Problem Management Areas; there are 33 in all and the top five areas that are given the highest priority for conversion are Clearview Village (north of Rt 100 in the Rock Creek watershed), Lake Placid area (Magothy River watershed), Amberley (Severn River watershed), and Edgewater Beach and Southdown Shores (South River watershed). Problem Area status is assigned based on a combination of several of the following factors: high water table, small lot size, impermeable soils, steep slopes, and setbacks from drinking water wells.

The County is hoping to convert about 200 septic systems to the sewer system per year in order to meet long term N reduction goals. The recommended process for such conversions will be a modification of the previous application process. As before, communities may petition for conversion and a simple majority vote (50% + 1) will trigger the requirement for all parcels in that community to be converted. Rather than charge the current front foot assessment to repay the County for its cost, a charge per household will be levied, thus eliminating the extra cost for larger properties or those with greater front footage.

According to AA County Bill 90-19, a payment deferment policy is recommended that would apply to households in the high-risk areas that meet at least one of the following criteria:

- parcels must be within the Critical Area,
- they must be in one of the Health Dept. Problem Areas as noted above,
- they must be in one of the areas slated for future sewer service as noted in the County Sewer and Water Master Plan or
- in an area adjacent to one of the areas listed above and also within the boundaries of a wastewater extension project that includes one of the criteria listed above.

If these criteria are met, residents may defer up to 50% of the total cost of connection and may have up to 40 years to pay it back. The ability to pay back in 40 years vs. 30 years was established by Bill 90-19 just passed by the County Council in December 2019. Deferred charges must be paid off in 40 years or within five years of the property being sold. A second bill proposed in December by Councilwoman Haire (95-19) would authorize the County to pay up to 25% of the total cost. At the Jan. 21 hearing of this bill, an amendment was passed that established that residents with

a gross income of \$300,000 or less could receive up to 25% of the total cost while those making over \$300,000 could receive up to 12.5%. The County is willing to cover some of the cost of the conversions by these subsidies because the conversions will help them meet their TMDL goals.

Another topic discussed by the Septic Task Force is the need for public outreach and education to help residents understand the importance of converting septic systems to sewer. A key insight is the fact that households on septic systems contribute 18.6 pounds of N per year to our waterways whereas households on sewer contribute 3 pounds N/year. Nitrogen is the primary nutrient that fuels algae blooms within our waterways, and algal blooms eventually lead to low dissolved oxygen concentrations in the Bay, causing loss of habitat for fish, crabs and oysters. This past December all of the major rivers in the county experienced a heavy bloom of dinoflagellates causing severe mahogany tides. Such events are triggered by nutrients flowing into our creeks and rivers from stormwater and septic systems.

One key concern expressed by Task Force members is the possible incentive to development that provision of sewer lines may permit. At the hearing for Bill 19-90, Councilwoman Haire estimated that about 100 new houses might be built in the County based on the extension of sewer lines. Since there are many criteria that must be met in order to qualify as a priority site for septic conversion, it is generally thought that the number of new houses will be limited.

There are still many steps that must be taken before this program is enacted, including the development of new policies relating to the timing of applications and coordination with State and County agencies. Stay tuned!