

January 31, 2017

MDE's intent to seek a Priority Funding Area (PFA) funding exception for a
167 home/business septic community of Edgewater Beach in Anne Arundel County

Background: The Bay Restoration (Septic) Fund (BRF) requires MDE to provide an opportunity for Public Comment and/or Public Hearing in cases where an Onsite Sewage Disposal System (OSDS)/septic system is located outside the County Priority Funding Area (PFA) and where BRF grant funding is being proposed for the public sewer connection. After addressing the public comments, if any, the MDE intends to seek a PFA funding exception from the Smart Growth Coordinating Committee under Maryland Department of Planning.

Public Comment Period: Through February 28, 2017. Send email comments to: jag.khuman@maryland.gov

Project: Sewer collection system for 157 existing homes/businesses and 10 vacant lots within the existing Edgewater Beach community with final treatment at the Annapolis ENR wastewater treatment plant.

Water Quality & Public Health Issues: County Health Department determination is summarized below:

Many of the properties in the project area have on-site sewage disposal systems operating in conditions with high groundwater, impermeable soils, or periodic flooding from high tides. The most widespread problem, however, affecting a majority of the properties, is that there is insufficient area for a replacement on-site sewage disposal system that meets State regulations (COMAR 26.04.02) regarding sizing and setbacks. The median lot size in the project area is less than 11,900 square feet, which is far less than the current state minimum lot size of 20,000 square feet for properties served by both a well and an on-site sewage disposal system. Since 1990, only two of the 15 building addition applications met the requirements of COMAR 26.04.02 to be allowed an additional bedroom. The density of the on-site sewage disposal systems and proximity to private wells makes it difficult to ensure the drinking water quality of private wells and groundwater.

The Anne Arundel County Department of Health identified three private water supply wells in the project area that had nitrate-nitrogen levels exceeding the Safe Drinking Water standard of 10 mg/l. One well had 18.7 mg/L, one had 15.8 mg/L, and the other had 12.2 mg/L. A review of the other 38 wells that were tested in the project area revealed six more wells that had nitrate-nitrogen levels between 5.0 and 10.0 mg/L. These nitrate levels are indicative of contamination from human activities and are believed to stem from on-site sewage disposal systems. The continued use of on-site sewage disposal systems in the project area presents a public health concern not only in regard to the repair and replacement of failing systems, but also in efforts to ensure that residents have safe drinking water that meets Federal and State water quality standards.

BRF Funding Eligibility: Up to \$20,000 per existing home as of 10/1/2008 (est. total 153); maximum \$3.06 million or actual prorated sewer collection system cost, whichever is lower.

Potential new growth: 10 future in-fill homes on existing vacant lots.

Measures being taken to mitigate new growth: Service area narrowly defined with potential 10 in-fill future homes.

Potential nitrogen reduction: Total for 157 existing and 10 future homes = ~2,176 lbs/yr (See attached).

Attachment: Nitrogen reduction calculation
Location Map

Preliminary Calculation of Net Nitrogen Reduction for Edgewater Beach Sewer Project

	Source Wastewater from Household (lbs of N per year)	Load after 50% reduction for BAT or other NRU (lbs of N per year)	Load After Reduction by Natural Groundwater Attenuation (lbs of N per year)	Load From ENR WWTP (lbs of N per year)	Net Nitrogen reduction (difference of columns to the left) (lbs of N per year)	Number of systems	Total Nitrogen Reduction (lbs of N per year)
BAT or NRU onsite sewage disposal system (all are in Critical Area)	23.4	11.7	9.36 (20% attenuation per MDE)	2.4	6.96	36	251
Septic System in Critical Area	23.4	no reduction for conventional septic system	18.72 (20% attenuation per MDE)	2.4	16.32	110	1,795
Septic System not within 1000 ft of surface water	23.4	no reduction for conventional septic system	16.38 (70% attenuation per MDE)	2.4	13.98	11	154
New Homes built After public sewer becomes available (increase in N)	23.4	Not applicable	Not applicable	2.4	(2.4) increase for each new home	Up to 10 Additional homes	increase (24.0)
Net Nitrogen Reduction							2,176



- Building Permits
- Community Areas
- Vacant Lots
- Not in Critical Area
- Project Boundary

Edgewater Beach Project Area



Technical Engineering
Utilities Planning Division

300 150 0 300 Feet

1/19/2017

