

Health Matters

Water Quality and Swimming or Fishing In Anne Arundel County Rivers and Creeks

Under State of Maryland regulations, the Anne Arundel County Department of Health conducts water quality sampling at community bathing beaches along area rivers and creeks from Memorial Day to Labor Day. The water bodies are tested for levels of enterococci bacteria. Below are some of the most commonly asked questions about the Department of Health's water quality sampling and risks associated with natural water bodies.

What are enterococci?

Enterococci are bacteria found in the intestine of all warm-blooded animals including humans. Because the bacteria are always present in animal and human waste and are easy to detect, they are used as indicators of water quality conditions. Enterococci are in food, water and soils but cannot become airborne. The U.S. Environmental Protection Agency (EPA) recommends using enterococci levels to measure fecal contamination in recreational water.

What does monitoring for enterococci in water samples show?

Enterococci results are most useful for watching long-term trends in water quality. Results are collected over several weeks and then evaluated. Since many factors can affect readings, single sample results may be misleading. Rainwater runoff, waterfowl and tidal action can cause high results that nature will fix in a day or two. If over time, sample results remain high, the Department will look for possible sources of pollution such as human sewage.

What causes the Department of Health to issue an advisory recommending against swimming and water sports in a certain area?

Swimming in natural water bodies always poses some risk. If spills, leaks or other problems are known to have allowed human waste to enter the water, the Department advises people not to swim there. Because enterococci have many sources, the sample results are evaluated with other information about the waterway. The Department of Health makes every effort to identify the source or sources of bacteria. When the source is human waste, the Department requires corrective action.

When will the Department of Health lift an advisory for a closed area?

An area may be reopened after results are back to an acceptable level for at least two consecutive days. The acceptable level is determined by the State, U.S. Environmental Protection Agency and the Anne Arundel County Department of Health. For bodies of water that the Department samples weekly and biweekly during the peak swimming season, the acceptable level is 104 MPN (most probable number of colonies of organisms) or fewer organisms per 100 milliliters of water. For areas that are sampled monthly, the acceptable level is 158 MPN per 100 milliliters. During the summer months, once an area has been sampled five times or more, the acceptable level is 35 MPN per 100 milliliters.

What kinds of health risks are associated with swimming and other direct water contact?

Natural bodies of water can contain bacteria, viruses or other harmful microorganisms. Common problems associated with swimming in contaminated water are ear, eye and skin infections. Diarrhea and other water-related illnesses can occur from accidentally swallowing contaminated water. Disease-causing microorganisms, such as *Mycobacterium marinum*, can also enter the body through cuts and scrapes.

If you have symptoms of a gastrointestinal, skin, ear or other infection, consult your doctor for immediate treatment. Let your doctor know that you have had contact or suspected contact with contaminated water.

What are *Mycobacterium marinum* and *Vibrio vulnificus*?

Mycobacterium marinum is a bacterium most commonly found in fresh or saltwater that may cause infections in fish and people. It is a natural part of the ecosystem of the Chesapeake Bay and its tributaries and also in other water bodies worldwide. In humans it can cause skin and joint infections. Water-related infections can also be caused by *Vibrio vulnificus*, a bacterium found in salt water.

What precautions should I take before swimming in area creeks and rivers?

After rainfall, all County beaches are under a no swimming/no direct water contact advisory for 48 hours due to predicted elevated bacterial levels. Avoid swimming until at least 48 hours or until the water clears. Look for storm drains along the beach. Don't swim near them. Look for trash and other signs of pollution such as oil slicks or scum on the water. These kinds of pollutants may indicate the presence of disease causing microorganisms that may also have been washed into the water. If the Department of Health has issued an advisory, it is a warning to swimmers and others using the water that enterococci results have exceeded the acceptable level. Don't swim if you have an ear infection, perforated eardrum, open cuts, skin lesions or immunity problems.

What should I do after coming in contact with natural bodies of water?

Wash well with soap and warm water.

How can I prevent illnesses when crabbing and fishing?

Assure proper bandaging and care of wounds or abrasions. Wear sturdy gloves if you will have contact with water and sharp objects (fish fins and scales, boating equipment, etc.). Keep hands as clean as you can. Waterless hand cleansers kill many germs and are easier on the skin than constant hand washing.

Is it OK to eat crabs and fish from an area that is closed to swimming?

Because cooking kills bacteria and viruses, it's generally okay to eat crabs and fish taken from these areas as long as they are handled properly. Fish should be kept in a cool place or on ice and then cooked thoroughly. Live crabs should be thoroughly cooked. Cooked fish and crabs should not come back into contact with any surfaces or containers where they were kept uncooked.

How can I find information about my favorite river or creek?

From Memorial Day to Labor Day, the Anne Arundel County Department of Health provides water sampling results at www.aahealth.org and on a 24-hour information line (410-222-7999). Both the Web site and phone line provide reports on emergency closings of local waterways year-round. The Department of Health offers e-mail alerts of recreational waterway advisories and closings. To sign up for these alerts, visit www.aahealth.org.

For more information, contact:

**Recreational Water Quality Program
Anne Arundel County Department of Health
3 Harry S. Truman Parkway
Annapolis, MD 21401
(410) 222-7241, Monday-Friday, 8 a.m. – 2 p.m.**

Health Matters

Bay Restoration Fund: Step-By-Step Instructions

Please follow these instructions to apply for the Bay Restoration Fund.

STEP 1: SUBMIT A COMPLETED BAY RESTORATION FUND GRANT APPLICATION FOR A NITROGEN-REDUCING PRETREATMENT UNIT

STEP 2: SUBMIT A PERC APPLICATION

You must fill out a Perc Application and schedule a site visit with the Area Sanitarian to determine whether your property is located in the Critical Area and if your septic system is failing. The perc test may or may not be necessary.

STEP 3: INCOME TAX VERIFICATION (APPLIES ONLY TO SITES OUTSIDE OF THE CRITICAL AREA OR SITES INSIDE THE CRITICAL AREA THAT DO NOT HAVE FAILING SEPTIC SYSTEMS)

If Bay Restoration program funds are available, the Department of Health must evaluate your federal income tax records and determine your eligibility for the program. Properties that are not the principle residence of the homeowner will qualify for no more than 25 percent funding of the nitrogen-reducing unit. A table showing Bay Restoration funding levels for ranges of taxable income is available at www.aahealth.org/brf/ or on our Bay Restoration Fund Income Eligibility Health Matters factsheet. A copy of the federal income tax records for each individual listed on the deed must be provided to the Department of Health for review and qualification for the program.

STEP 4: SELECT A BEST AVAILABLE TECHNOLOGY (BAT) UNIT FROM THE FIXED COST SYSTEM OR OBTAIN THREE WRITTEN BIDS FOR INSTALLATION OF A BAT UNIT

Option 1: Fixed Cost System

Choose one of the two BAT units listed below. The property owner must contact the vendor, enter into a contract for the installation of a unit and submit a copy of the contract to the Anne Arundel County Department of Health, Sanitary Engineering Program, 3 Harry S. Truman Parkway, Annapolis MD 21041.

HOOT 600 BNR

Local Vendor: Mayer Bros. Inc., 410-796-1434

BAT Unit Price: \$13,000 (100 percent funding)

NORWECO SINGULAIR (plastic or concrete tank)

Local Vendor: Back River Pre-Cast, LLC, 410-833-3394

BAT Unit Price: \$11,533 (100 percent funding)

Option 2: Owner Selects BAT Unit and Obtains Three Written Bids

The property owner may secure three written bids from a list of pre-qualified, licensed disposal system contractors. Property owners are encouraged to research the different units and select a BAT unit most suitable for their individual and household needs.

Written bids must itemize the purchase cost of the BAT unit, the cost of BAT installation, and the cost of a five-year operation and maintenance service contract. If the homeowner does not qualify for 100 percent funding, the bids must stipulate the amount to be paid by the homeowner and the amount to be paid by the County. All written bids must be submitted to the Department of Health. The Department reserves the right to evaluate and reject any written bid based on the purchase, installation, and five-year operation and maintenance cost of the BAT unit. If the property owner chooses a contractor other than the low-bid contractor, the property owner is responsible for paying the cost difference between the two bids.

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The property owner must indicate which BRF contractor was selected by signing that contractor's written bid. Written bids must be submitted to the Anne Arundel County Department of Health, Sanitary Engineering Program, 3 Harry S. Truman Parkway, Annapolis, MD 21401.

STEP 5: SIGN AND RETURN THE BAY RESTORATION FUND GRANT AGREEMENT

A Bay Restoration Fund Grant Agreement will be mailed to you once the Department of Health reviews the written bids. The agreement is a legal document that is recorded in Anne Arundel County Land Records against your property deed. The agreement must be signed in front of Department of Health staff or a notary public and must be returned within 30 days of receiving written bids.

STEP 6: WAIT FOR CERTIFICATE OF QUALIFICATION

Bay Restoration grant funds are administered on a first come, first served basis. Individual grants are awarded based on an applicant's meeting the program's eligibility requirements and the availability of BRF funds. A waiting list will be created if the number of eligible projects exceeds the availability of funds.

Based on the availability of funds, the Department of Health will send you and your contractor a Certificate of Qualification. The Certificate of Qualification certifies that Bay Restoration funds are available for the installation of a BAT unit on your property. The BAT unit must be installed within 45 days of receiving the Certificate of Qualification. Extensions are granted at the discretion of the Department of Health and are subject to the availability of BRF funds.

STEP 7: SCHEDULE INSTALLATION OF THE BAT UNIT

Schedule the installation of the BAT unit with the selected contractor. Your contractor is responsible for applying for a County permit to install the BAT unit and notifying the Department of Health 48 hours prior to BAT installation. The grant does not cover the cost of the County permit fee, which is the responsibility of the property owner. The Department of Health and a manufacturer representative will inspect the BAT unit to ensure it complies with manufacturer and County requirements.

STEP 8: VENDOR OR CONTRACTOR PAYMENT

The selected contractor or approved vendor must submit an invoice to the Department of Health for payment. Payment will be made to the approved contractor or vendor based on the grant award.

For more information, contact:

**Sanitary Engineering Program
Bureau of Environmental Health
Anne Arundel County Department of Health
3 Harry S. Truman Parkway
Annapolis, Maryland 21401
410-222-7324**

Health Matters

Senate Bill 554

Chesapeake Bay Nitrogen Reduction Act of 2009

New Requirements for the Repair, Replacement and Newly Constructed Septic Systems in the Critical Area

What is Senate Bill (SB) 554?

SB 554 is the Chesapeake Bay Nitrogen Reduction Act of 2009 (the Act) that establishes new requirements for the repair, replacement or new installation of septic systems within the Critical Area. The Act requires the installation of a nitrogen-reducing unit (NRU) in place of a septic tank.

What properties are affected by the Act?

The Act applies to the installation of septic tanks, drain fields, drywells, sand mound systems, pressure dosed beds and any other type of on-site sewage disposal system on a property in the Critical Area. This includes replacement of septic tanks on properties in the Critical Area. If any portion of a property falls within the Critical Area, the property must comply with the Act. Properties located outside the Critical Area and the repair or replacement of piping in the Critical Area due to clogged or broken sewer lines are not required to comply with the Act.

When do the new requirements take effect?

The new requirements take effect on October 1, 2009.

What type of nitrogen-reducing unit is necessary to comply with the Act?

The Act establishes Best Available Technology (BAT) for removing nitrogen as the type of NRU acceptable for complying with the Act. Only pre-qualified licensed disposal system contractors may install an NRU.

What information must I submit to install an NRU?

A site plan of the property and a completed Perc Application with appropriate fees must be submitted to:

Permit Application Center
2664 Riva Road
Annapolis, Maryland 21401

Anne Arundel County Government Office Building
7320 Ritchie Highway
Glen Burnie, Maryland 21061

Online Registration is available at www.aahealth.org, Environmental Health, Sanitary Engineering Program.

What programs are available to assist property owners with the cost of installing an NRU?

The Bay Restoration Fund provides grants to assist property owners with the cost of installing the nitrogen-reducing unit. If sufficient funds are available, applications are processed on a first come, first served basis with priority given to the repair of failing septic systems in the Critical Area.

The Linked Deposit Loan Program discounts the loan interest rate to install a nitrogen-reducing system or to repair or replace a failed septic system.

The Well and Septic System Assistance Program helps income-qualified applicants repair or replace failing septic systems.

More information on the above programs can be found by at www.aahealth.org or by contacting the Sanitary Engineering Program at 410-222-7193.

What other conditions apply to the installation of an NRU?

Each property owner is required to enter into an agreement, which specifies the maintenance responsibilities of the NRU and the square footage and the number of bedrooms of the dwelling. In addition, the property owner is required to maintain an operation and maintenance (O&M) service contract with a certified service provider for the life of the NRU. The certified service provider is required to submit annual reports on the inspection, operation and maintenance of the NRU to the Department of Health.

Where can I receive additional information?

For more information, contact:
Anne Arundel County Department of Health
Environmental Health
Sanitary Engineering Program
3 Harry S. Truman Parkway
Annapolis, MD 21401
410-222-7193

Health Matters

Bay Restoration Fund (BRF): Income Eligibility Criteria

Department of Health

J. Howard Beard

Health Services Building

3 Harry S. Truman Parkway

Annapolis, MD 21401

www.aahealth.org

www.aasalud.org

How much BRF assistance is available?

The repair of a failing system **in the Critical Area** (all land within 1,000 feet of the high water line of tidal waters of the Chesapeake Bay and its tributaries) is eligible for 100 percent assistance of the Best Available Technology (BAT) unit purchase, installation and five-year maintenance cost, regardless of the homeowner's income. After December 31, 2012, failing septic systems in the Critical Area will be subject to income and occupancy-based funding.

For all other properties, funding will be based on income and occupancy as shown in the table below.

Bay Restoration Fund Grant Award Guidelines for Homeowner-Occupied Properties Outside the Critical Area or in the Critical Area But Not Failing

% of Grant Award	2011 Taxable Income (Single)		2011 Taxable Income (Married)		2011 Taxable Income (Married Filing Separately)		2011 Taxable Income (Head of Household)	
	Over	Up to	Over	Up to	Over	Up to	Over	Up to
100	\$0	\$83,600	\$0	\$139,350	\$0	\$69,675	\$0	\$119,400
75	\$83,600	\$174,400	\$139,350	\$212,300	\$69,675	\$106,150	\$119,400	\$193,350
50	\$174,400	\$379,150	\$212,300	\$379,150	\$106,150	\$189,575	\$193,350	\$379,150
25	\$379,150		\$379,150		\$189,575		\$379,150	

The system repair or upgrade of a **commercial, rental or seasonally occupied property not certified to be a failing system in the Critical Area** will only be eligible for a grant not to exceed 25 percent.

Families with low or moderate incomes can apply for additional assistance to help with drainfield, dry well and other septic system replacement and repair costs.

For more information, contact:

Sanitary Engineering Program
Bureau of Environmental Health
Anne Arundel County Department of Health
3 Harry S. Truman Parkway
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