Appendix C

BAY RESTORATION (SEPTIC) FUND (BRF) PROGRAM IMPLEMENTATION GUIDANCE FOR FY 2017 (Annotated Code of MD §9-1605.2 & COMAR 26.03.13) FOR ON-SITE SEWAGE DISPOSAL SYSTEM (OSDS) UPGRADES USING BEST AVAILABLE TECHNOLOGY (BAT) FOR NITROGEN REMOVAL

I. Prioritization

The **"grant recipients"** (local government, health department, others, who are awarded BRF septic funds by the Board of Public Works) should prioritize applications for financial assistance as follows:

1. Failing OSDS in the Critical Areas
2. Failing OSDS outside the Critical Areas
3. Non-Conforming OSDS in the Critical Areas
4. Non-conforming OSDS outside the Critical Areas
5. Other OSDS in the Critical Areas, including new construction
6. Other OSDS outside the Critical Areas, including new construction

II. Income Based Grant Eligibility

Grant assistance should be based on the following Income Criteria:

	% Eligibility Up To
Homeowners (may include homes under a housing cooperative)	
1. Household income* less than or equal to $300,000/year	100%
2. Household income* more than $300,000/year	50%
Non-profit Entities (including governmental entities)	100%
For-profit Businesses	50%

* For income verification use federal tax return (e.g., Line 22: total income on 2015 Form 1040)

III. Eligible Projects for Bay Restoration (Septic) Fund Grant Funding

Based on the above prioritization, the BRF grant funding may be used for any **one** of the following eligible project options:

1. The cost attributable to upgrading an existing OSDS to BAT for nitrogen removal. Note: This section also applies to BAT upgrade of shared/large-flow OSDS, many of which will require a MDE groundwater discharge permit and will need to be designed, secure MDE sewerage construction permit, and bid to determine BRF grant eligible cost.

2. The cost differential* between a conventional OSDS and one that utilizes BAT for Nitrogen Removal for new construction. ** For "cost differential" purposes on new construction, use a statewide average cost of $1,200 as the cost of a traditional septic tank. Maximum BRF grant = (BAT Cost - $1,200) x % eligibility (based on income in Section II)*

3. The cost, up to the sum of the cost of each "individual BAT system", of replacing multiple OSDS located in the same community with a new community system that is owned by a local government and meets Enhanced Nutrient Removal Standards *(MDE prior approval required)*.

4. The cost, up to the sum of the cost of each "individual OSDS system using BAT", to connect properties to an existing municipal biological or enhanced nutrient removal wastewater treatment

plant *(MDE prior approval required.)* Use the Tables below to see if a project meets the statutory requirements.

Connecting OSDS/Septic system to a Wastewater Treatment Plant

The sewer connection project can be funded with BRF Septic grant funds, only if all of the following conditions are met:

1. Are BRF grant funds available to connect OSDS to sewers based on "prioritization" criteria (Item I above)? (For a community of several OSDS, at least 50% OSDS must fall within the qualifying priority criteria)

2. Is the proposed sewer connection to a BNR or ENR Wastewater Treatment Plant?

3. Is the Environmental Impact of the OSDS documented by the local government?

4. Is the sewer connection more cost-effective than the cost of repairing or replacing the OSDS with BAT? Example: For an OSDS community with say 50 homes, is the sewer connection cost less than $1 million? (50 x $20,000 average cost repairing or replacing an OSDS with BAT), OR the Individual replacement of the OSDS not feasible? Example: For an OSDS community, can Environmental Health Director certify that the individual replacement on more than 50% of existing OSDS is not feasible OR County rules do not allow replacements due to availability of public sewerage?

5. Is the proposed sewer connection consistent with the County Comprehensive Plan and Water/Sewer Plan?

6. Did the OSDS/Septic system being connected to the WWTP exist as of 10/1/2008?

7. Is the OSDS/Septic system being connected to the WWTP located in the County Priority Funding Area?

In addition to above, for an OSDS system located outside the County Priority Funding Area:

a. The OSDS proposed for sewer connections must be specifically identified in the County W/S plan as an area of "public health concern" or the County environmental health director must "certify" this as an area of public health concern with the intent to incorporate this in the W/S plan at a later date.

b. MDE will require additional information (such as public health issues; potential future in-fill development; mitigation measures proposed to limit growth; net nitrogen reduction after accounting for maximum future in-fill development) to determine if a PFA exception is warranted and provide an opportunity for public comments.

If a PFA exception is approved by the "smart growth coordinating committee", the sewer connection project can be funded with BRF Septic grant funds. Special grant conditions regarding denied access to sewer main, limits on maximum new in-fill development etc. will apply.

Details on how to determine maximum eligible BRF grant amount is shown below.

The maximum BRF grant amount is the **lesser of** the prorated[1] sewer connection Project Cost[2] or the amount calculated in (A) or (B) below:

A. # of septic systems or EDU (existing as of 10/1/2008) x $20,000 (cost of one individual BAT septic system) x 50% (Minimum Income Based % eligibility); or

B. Added together…for each septic system or EDU (existing as of 10/1/2008) x $20,000 (cost of a complete OSDS with BAT) x % eligibility for each homeowner/business based on Income criteria under Section II.

1. Prorated Cost (Max) = $\frac{\text{Project Cost x \# septics or EDU (existing as of 10/1/08) x Wt. \% income eligibility}}{\text{Total \# septics or EDU (including future in-fill that may share the sewer system)}}$

or

Prorated Cost (Min) = $\frac{\text{Project Cost x \# septics or EDU (existing as of 10/1/08) x 50\% eligibility (minimum)}}{\text{Total \# septics or EDU (including future in-fill that may share the sewer system)}}$

2. Project Cost includes cost of sewerage system design & construction, including connection fees for the purchase of capacity at the existing BNR/ENR wastewater treatment plant.

EDU: Equivalent Dwelling Units in case of multiple users connected to a shared Onsite Sewage Disposal System (OSDS)

5. If BRF funds are available after allocating funds for "BAT" upgrades under Section III - 1 & 2, to all applicants (irrespective of income), the grant funds may also be provided for the repair or replacement of Non-BAT components (e.g., drainfields) for a "low income" household applicant with a "failing" OSDS (this option is not available to businesses or non-profit entities). At least three bids are required for the non-BAT components and one bid can be from the vendor providing the BAT system. The current low-income (DHR energy assistance program) eligibility criteria* is:

Income Eligibility Limits Effective July 1, 2015 to June 30, 2016		
Household Size	Maximum Gross Monthly Income Standards	Maximum Gross Yearly Income Standard
1	$1,716.00	$20,598.00
2	$2,323.00	$27,878.00
3	$2,930.00	$35,158.00
4	$3,536.00	$42,438.00
5	$4,143.00	$49,718.00
6	$4,750.00	$56,998.00
For Each Additional Person, Add	$607.00	$7,280.00

* See web link for updates: http://www.dhr.state.md.us/blog/?page_id=4337

Grant allowable BAT Cost: Includes the capital cost of BAT plus the cost of 5-years of operations and maintenance (O&M), performed by a certified service provider at a minimum of once per year or the minimum frequency recommended by the manufacturer **(This O&M funding is not applicable to BRF grant funded projects under categories "3" and "4" above.)**

IV. MDE Approved BAT for Nitrogen Removal

1. Ranking of BAT Systems: Consistent with HB 347 (2011 Session), effective June 1, 2011, and every 2-years thereafter, MDE is required to provide on its website an Evaluation and Ranking of all best available nitrogen removal technologies for on-site sewage disposal systems. The evaluation will include for each BAT technology:

- Total Nitrogen Reduction
- Total cost including Operation, Maintenance and Electricity
- Cost per pound of Nitrogen Reduction

You MUST provide a copy of the MDE evaluation/ranking (see link below) to all BAT grant applicants (i.e., homeowners, businesses), so that they can make an informed decision in selecting a BAT system. A homeowner may select any of the field-verified BAT systems for BRF grant purposes.

http://www.mde.state.md.us/programs/Water/BayRestorationFund/OnsiteDisposalSystems/Documents/HB347%20ranking%20data%2001072015%20updating.pdf

2. Lowest Cost per Pound of Nitrogen Removal BAT: To simplify the procurement process MDE undertook an Invitation for Bids in 2013, from the field-verified BAT technology vendors/manufacturers: Bio-Microbics, Hoot, Norweco, Orenco, and Septitech. For Bay Restoration Fund BAT procurement purposes, MDE selected the following fixed unit price BAT by Region based on the lowest cost per pound of nitrogen removal, adjusted for 12-month inflation (Jan 2015 – Jan 2016) **@ 1.37% over FY 2016.**

Vendor (in ranking order based on Cost/Lbs Nitrogen Reduction) **CENTRAL Region Counties:** Anne Arundel, Baltimore, Carroll, Cecil, Harford, Howard & Montgomery	Cost/Lbs Nitrogen Reduction Comparison Ranking	BAT System	**FY 2017 Unit Price/BAT**	Contact	Phone
JONES PUMP SERVICE	1	Bio-Microbic (RetroFast) *	**$10,359**	Dwayne Jones	410-836-9206
Atlantic Solutions, Ltd. (a)	2	Orenco (Advantex AX20)	**$13,019**	Robert Johnson	877-214-9283
Mayer Brothers, Inc.	3	Hoot (BNR)	**$12,731**	Nancy Mayer	410-796-1434
Price to Match by other field-verified vendors (cost/lb equivalent)			**Match Price**		
Back River Pre-Cast, LLC (b)	4	Norweco (Singular TNT)	**$10,942**	Matt Geckle	410-833-3394
JONES PUMP SERVICE	5	Septitech (M400)	**$13,328**	Dwayne Jones	410-836-9206
Sample Excavating Co. Inc	Added	Hydro-Action (AN Series)	**$12,975**	Mike Sample	443-807-8639
BayStar Precast Corp.	Added	AquaKlear	**$10,742**	Dave Care	410-977-3453

(a). Orenco (Advantex AX20RT), if necessary – Match Price: $15,119

(b). Norweco (Singular Green), if necessary - Match Price: $11,069

* RetroFast BAT unit suitable for up to 3-bedroom home and less than 4 occupants.

Vendor (in ranking order based on Cost/Lbs Nitrogen Reduction) **EASTERN Region Counties:** Caroline, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico & Worcester.	Cost/Lbs Nitrogen Reduction Comparison Ranking	BAT System	**FY 2017 Unit Price/BAT**	Contact	Phone
Gillespie and Son, Inc.	1	Bio-Microbic (RetroFast) *	**$ 9,847**	James Gillespie	410-778-0900
Service Energy (c)	2	Orenco (Advantex AX20)	**$13,378**	Paul Hufschmidt	301-734-7433
Towers Concrete Products (d)	3	Norweco (Singular TNT)	**$10,885**	John Short	443-786-**0594**
Price to Match by other field-verified vendors (cost/lb equivalent)			**Match Price**		
Mayer Brothers, Inc.	4	Hoot (BNR)	**$12,666**	Nancy Mayer	410-796-1434
Gillespie and Son, Inc.	5	Septitech (M400)	**$13,260**	James Gillespie	410-778-0900
Sample Excavating Co. Inc	Added	Hydro-Action (AN Series)	**$12,915**	Mike Sample	443-807-8639
BayStar Precast Corp.	Added	AquaKlear	**$10,687**	Dave Care	410-977-3453

(c). Orenco (Advantex AX20RT), if necessary – Match Price: $15,041

(d). Norweco (Singular Green), if necessary - Match Price: Same as Singular TNT above

* RetroFast BAT unit suitable for up to 3-bedroom home and less than 4 occupants.

Vendor (in ranking order based on Cost/Lbs Nitrogen Reduction) **SOUTHERN Region Counties:** **C**alvert, Charles, Prince George's & St. Mary's	Cost/Lbs Nitrogen Reduction Comparison Ranking	BAT System	**FY 2017 Unit Price/BAT**	Contact	Phone
JONES PUMP SERVICE	1	Bio-Microbic (RetroFast) *	**$10,359**	Dwayne Jones	410-836-9206
Atlantic Solutions, Ltd. (e)	2	Orenco (Advantex AX20)	**$12,122**	Robert Johnson	877-214-9283
Superior Tank, Inc. (f)	3	Norweco (Singular TNT)	**$10,969**	Jeffrey Earnshaw	301-274-3772
Price to Match by other field-verified vendors (cost/lb equivalent)			**Match Price**		
Mayer Brothers, Inc.	4	Hoot (BNR)	**$12,764**	Nancy Mayer	410-796-1434
JONES PUMP SERVICE	5	Septitech (M400)	**$13,362**	Dwayne Jones	410-836-9206
Outback Porta-Jon, Inc	Added	Hydro-Action (AN Series)	**$12,975**	Steve Willson	410-257-1600
BayStar Precast Corp.	Added	AquaKlear	**$10,770**	Dave Care	410-977-3453

(e). Orenco (Advantex AX20RT), if necessary – Match Price: $15,157

(f). Norweco (Singular Green), if necessary - Match Price: Same as Singular TNT above

* RetroFast BAT unit suitable for up to 3-bedroom home and less than 4 occupants.

Vendor (in ranking order based on Cost/Lbs Nitrogen Reduction) **WESTERN Region Counties:** Allegany, Frederick, Garrett & Washington	Cost/Lbs Nitrogen Reduction Comparison Ranking	BAT System	**FY 2017 Unit Price/BAT**	Contact	Phone
JONES PUMP SERVICE	1	Bio-Microbic (RetroFast) *	**$10,359**	Dwayne Jones	410-836-9206
Atlantic Solutions, Ltd. (g)	2	Orenco (Advantex AX20)	**$14,147**	Robert Johnson	877-214-9283
Mayer Brothers, Inc.	3	Hoot (BNR)	**$13,244**	Nancy Mayer	410-796-1434
Price to Match by other field-verified vendors (cost/lb equivalent)			**Match Price**		
JONES PUMP SERVICE	4	Septitech (M400)	**$13,866**	Dwayne Jones	410-836-9206
C.R. Semler (h)	5	Norweco (Singular TNT)	**$11,381**	Charles Semler	301-416-0414
Blue Water Environmental, LLC	Added	Hydro-Action (AN Series)	**$13,482**	Mark O'Rourke	240-444-6401
BayStar Precast Corp.	Added	AquaKlear	**$10,847**	Dave Care	410-977-3453

(g). Orenco (Advantex AX20RT), if necessary – Match Price: $15,727

(h). Norweco (Singular Green), if necessary - Match Price: Same as Singular TNT above

* RetroFast BAT unit suitable for up to 3-bedroom home and less than 4 occupants.

Unit Price/BAT includes 5-year O&M and MD sales tax (which must be paid, unless BAT unit owner is a sales tax exempt public entity). The price does not include the cost of permits. A new procurement for BAT unit prices is anticipated for FY 2018.

For Class IV System BRF grant funding eligibility, please contact MDE.

V. Grant Recipient BAT Selection, Procurement and Price

To allow flexibility, the grant recipients (local government, health department etc.) who were awarded the BRF funds by the Board of Public Works) may use the following procurement options for homeowners/businesses to select a BAT technology:

1. Homeowner/business chooses one of the higher ranking (Cost/Lb nitrogen reduction) MDE selected/procured BAT system identified by Region in Section IV-(2) above. The maximum grant allowable cost will be the fixed BAT unit price. No further local procurement action is needed.

2. Homeowner/business chooses a lower ranking (Cost/Lb nitrogen reduction) BAT, the maximum BRF grant allowable amount is the "Match Price" based on an equivalent cost per pound of nitrogen reduction calculated using the cost per pound conversion factor of the lowest ranking MDE selected fixed price vendor by Region, as the benchmark. This "Match Price" for the low ranking (non-selected) field verified vendors is also shown in Section IV-(2) above. The vendor can either offer the BAT for the Match Price or the homeowner/business can pay for the price difference. Similar Match Prices may be extrapolated for any new field verified vendors that are approved over time *(contact MDE for assistance.)*

3. The grant recipient undertakes a local procurement for the unit cost of the BAT installed, including 5-year O&M based on selection factors such as price, nitrogen reduction efficiency, electrical cost etc. The maximum BRF grant allowable cost will be the fixed unit price provided by the selected BAT vendor for that County.

In cases where the BRF grant is funding low income drainfields, at least three bids/price proposals should be sought from installers and the grant eligibility will be limited to the lowest price. This supporting documentation should be included with the payment request to MDE.

In cases where a "composite" tank in lieu of a concrete tank or a "larger" tank is necessary, the recipient may negotiate a reasonable cost change order with the selected BAT vendor. This supporting documentation, along with the justification, should be included with the payment request to MDE.

Note 1: BRF grant payment should be made directly to the BAT vendor/installer and not to the homeowner/business applicant.

Note 2: For BAT upgrades, the grant funds can only be used towards field-verified BAT technologies approved by MDE.

Note 3: HB 90 (2016 Legislative Session): Effective October 1, 2016, a low income household (same criteria as page 3) is eligible for 50% grant to cover the annual O&M cost, beyond the initial 5-year O&M provided at time of BAT installation. You may approve these O&M grants under the guidelines below, and MDE will award you additional funds during FY 2017, if needed.

- **Verify the homeowner is eligible as a low income household.**
- **Verify the first BAT 5-year O&M period has expired or will expire in FY 2017.**
- **Review the new O&M contract for amount and term being offered by the vendor to the homeowner. Note, the contract can be for a term of up to than 5 years.**
- **Allocate 50% of O&M cost as grant for payment to vendor from your existing FY 2017 grant award. Advise the homeowner and vendor of grant eligibility.**
- **After proof of payment by the homeowner to vendor for their 50% share, make the 50% grant payment to vendor.**

Contact MDE if you have questions.