

**BRF Eligibility Determination for WWTPs  
For Projects Starting Construction on or after July 1, 2017  
(Based on House Bill 384 of 2017)**

The Department will make its best efforts to reach a resolution on eligibility determination to the satisfaction of all involved parties, while maintaining consistency with the existing laws, regulations and departmental policies. Based on the above, for a project involving ENR upgrades, the following items would be eligible for ENR grants participation:

<b>Process</b>	<b>ENR Eligibility</b>
Headwork/Grit Removal	50% Eligible only if the existing system is lagoon and does not include Headworks/Grit Removal
Decommissioning of treatment lagoon that will no longer be utilized with the new system. The decommissioning method must be consistent with MDE-LMA guidelines.	50% eligible if the existing system is lagoon
Equalization	50% eligible if justified as cost effective measure to reduce the size of the bioreactor.
Primary Clarifier	Not eligible
Secondary Clarifier	100%
Sludge	50% if the process is changed to activated sludge due to the ENR project  OR  If existing WWTP is already activated sludge, then provided up to 20% subject to justification of increased volume of sludge due to Phosphorus removal
Phosphorus Removal	100%
Nitrogen Removal Bioreactor	100%.
Conventional or Denitrification filter	100%
Disinfection/Post Aeration	Not eligible
Common items such as site work, yard piping, engineering services, etc.	Prorated based on Eligible/Total

**Flow Proration (Expansion Adjustment):**

ENR participation is limited to the approved design capacity, which is provided below for minor WWTPs. Initially, use the following to prorate for expansion:

$$\% \text{ Eligible} = (\text{Allowable Capacity}/\text{Expanded Capacity})^{0.62}$$

## **Cost Effectiveness of the Upgrade**

To be allowed for funding under the BRF law (§9-1605.2(6)(ii)1), a grantee must demonstrate that the selected ENR process is cost-effective at the approved design capacity using present worth analysis or other equivalent method.

MDE would consider any more cost effective alternative to the ENR process that would achieve the same nutrient reduction goals or better, such as conveyance of the flow to an ENR facility, or groundwater discharge.

Once an alternative has been determined to be as the most cost effective, the following methods will be used to determine the eligibility determination:

### **Conveyance to an ENR Facility as an Alternative to the Upgrade:**

The cost of upgrading the plant to ENR must be compared to the conveyance to an ENR facility that has the capacity to accept the flows.

Eligibility will be determined using the itemized cost in the ENR option and then the resulting ENR percentage is applied to the conveyance system cost.

### **Converting Surface to Groundwater Discharge:**

Converting surface to groundwater discharge can be funded only if it is determined to be more cost effective than to continue the surface discharge.

If groundwater discharge is to be funded, ENR eligibility is determined using the method below for Upgrading WWTP with Groundwater Discharge Permit.

## Upgrading WWTP with Groundwater Discharge Permit

### Spray or Drip Irrigation with no Surface Discharge:

This can consist of additional treatment, land, or combination of both (whichever is more cost effective) to bring TN to 0 mg/l below the root zone and TP to 0 mg/l before reaching groundwater.

#### **ENR Eligibility:**

- Land purchase cost is not eligible.
- Expansion cost is not eligible.
- Possible Eligibility Determination Scenarios:
  1. **WWTP Remains Secondary ( $\geq 8.1$  mg/l TN):** No ENR funding will be provided for any WWTP upgrade. Irrigation system (including winter storage) is 100% ENR eligible.
  2. **WWTP Upgraded to TN between 8 and 3.1 mg/l:** WWTP would be eligible for ENR using the above eligibility determination guidelines for WWTPs. Irrigation system (including winter storage) is ENR eligible at 100%.
  3. **WWTP Upgraded to 3 mg/l TN:** WWTP would be funded by ENR using the above eligibility determination guidelines for WWTPs. Irrigation system (including winter storage) is ENR eligible at 100%.

### Spray or Drip Irrigation with Winter Surface Discharge:

This will consist of full ENR treatment upgrade that would produce an annual average concentration of 3 mg/l TN and 0.3 TP. The spray/drip irrigation system performance must achieve TN of 0 mg/l below the root zone and TP of 0 mg/l before reaching groundwater.

#### **ENR Eligibility:**

- Land purchase cost is not eligible.
- Expansion cost is not eligible.
- For the project to be funded, WWTP must be upgraded to ENR.
- WWTP would be funded by ENR using the above eligibility determination guidelines for WWTPs. Irrigation system is ENR eligible at 100%.

### Other Types of Groundwater Discharge (RI, BIP, onsite, etc.):

This will consist of full ENR treatment upgrade that would produce an annual average concentration of 3 mg/l TN and 0.3 TP.

#### **ENR Eligibility:**

- Land purchase cost is not eligible.
- Expansion cost is not eligible.
- For the project to be funded, WWTP must be upgraded to ENR.
- WWTP would be funded by ENR using the above eligibility determination guidelines for WWTPs. No ENR funding would be provided for the disposal system.

## Minor WWTPs Funded Flow

Row No.	COUNTY	Facility Name	BRF Funded Flow (in NPDES Permit on July 1, 2012- Not to Exceed the Cap) in MGD
1	ALLEGANY	RAWLINGS (Private)	0.143
2	ANNE ARUNDEL	PINEY ORCHARD (Private)	0.700
2	CAROLINE	GREENSBORO WWTP	0.280
3	CAROLINE	RIDGELY WWTP	0.200
4	CAROLINE	PRESTON WWTP	0.115
5	CARROLL	MANCHESTER WWTP	0.500
6	CARROLL	UNION BRIDGE WWTP	0.200
7	CARROLL	NEW WINDSOR WWTP	0.115
8	CECIL	CHERRY HILL WWTP	0.250
9	CECIL	PORT DEPOSIT WWTP	0.150
10	CECIL	CHESAPEAKE CITY WWTP	0.163
11	CECIL	CECILTON WWTP	0.100
12	CECIL	ELK NECK STATE PARK	0.060
13	CECIL	HARBOR VIEW	0.065
14	CECIL	RISING SUN WWTP	0.500
15	CHARLES	CLIFTON ON THE POTOMAC	0.070
16	CHARLES	COLLEGE OF SOUTHERN MD WWTP	0.060
17	DORCHESTER	TWIN CITIES WWTP	0.281
18	DORCHESTER	VIENNA WWTP	0.137
19	FREDERICK	JEFFERSON WWTP	0.300
20	FREDERICK	LEWISTOWN	0.022
21	FREDERICK	MYERSVILLE WWTP	0.300
22	FREDERICK	MIDDLETOWN EAST WWTP	0.250
23	FREDERICK	MIDDLETOWN WWTP	0.250
24	FREDERICK	WOODSBORO WWTP	0.250
25	FREDERICK	NEW MARKET WWTP	0.240
26	FREDERICK	POINT OF ROCKS WWTP	0.230
27	FREDERICK	FOUNTAINDALE WWTP	0.200
28	FREDERICK	MONROVIA WWTP	0.200
29	FREDERICK	MILL BOTTOM WWTP	0.100
30	FREDERICK	PLEASANT BRANCH WWTP	0.100
31	GARRETT	ACCIDENT WWTP	0.095
32	GARRETT	DEEP CREEK LAKE WWTP	2.200
33	GARRETT	TROUT RUN WWTP	0.900
34	KENT	BETTERTON WWTP	0.148
35	KENT	GALENA WWTP	0.080

36	KENT	WORTON - BUTLERTOWN WWTP	0.250
37	KENT	KENNEDYVILLE	0.060
38	KENT	ROCK HALL WWTP	0.480
39	KENT	TOLCHESTER WWTP	0.265
40	PRINCE GERORGE'S	CHELTENHAM BOYS VILLAGE WWTP	0.070
41	QUEEN ANNES	QUEENSTOWN WWTP	0.085
42	QUEEN ANNES	SUDLERSVILLE WWTP	0.200
43	QUEEN ANNES	MILLINGTON WWTP	0.140
44	QUEEN ANNES	CHURCH HILL WWTP	0.080
45	SOMERSET	EASTERN CORRECTIONAL INSTITUTE	0.500
46	SOMERSET	EWELL WWTP	0.065
47	ST MARYS	POINT LOOKOUT STATE PARK WWTP	0.090
48	TALBOT	TRAPPE WWTP	0.200
49	TALBOT	OXFORD WWTP	0.150
50	TALBOT	TALBOT COUNTY REGION V WWTP	0.150
51	WASHINGTON	SMITHSBURG WWTP	0.333
52	WASHINGTON	BOONSBORO WWTP	0.530
53	WASHINGTON	HANCOCK WASTEWATER LAGOON	0.380
54	WASHINGTON	CLEAR SPRING WWTP	0.200
55	WASHINGTON	FUNKSTOWN WWTP	0.200
56	WASHINGTON	ANTIETAM WWTP	0.163
57	WICOMICO	WILLARDS WWTP	0.200
58	WICOMICO	SHARPTOWN WWTP	0.150
59	WICOMICO	PITTSVILLE WWTP	0.115
60	WICOMICO	HEBRON WWTP	0.101

### Groundwater WWTPs Funded Flow

Row No.	COUNTY	Facility Name	BRF Funded Flow (in Permit on July 1, 2012) in MGD
1	ANNE ARUNDEL	MES - CROWNSVILLE HOSPITAL WWTP	0.30000
2	CALVERT	SOLOMONS ISLAND WWTP	0.70000
3	CALVERT	PRINCE FREDERICK WWTP	0.45000
4	CALVERT	PRINCE FREDERICK WWTP NO. 2	0.30000
5	CECIL	NEWARK COUNTRY CLUB	0.10700
6	CHARLES	COBB ISLAND WASTEWATER FACILITY	0.15800
7	PRINCE GEORGE'S	CEDARVILLE MOBILE HOME PARK	0.08010
8	ST MARY'S	ST. CLEMENT'S SHORES WWTP	0.20000
9	ST MARY'S	WICOMICO SHORES WWTP	0.14100

10	TALBOT	MARTINGHAM UTILITIES WWTP & WTP	0.06680
11	WICOMICO	NUTTER'S CROSSING RESIDENTIAL COMMUNITY	0.06684
12	WORCESTER	MYSTIC HARBOUR WATER TREATMENT PLANT	0.25000
13	WORCESTER	RIDDLE FARM WWTP	0.19700
14	WORCESTER	THE LANDINGS SEWAGE TREATMENT FACILITY	0.10000
15	WORCESTER	RIVER RUN WWTP	0.09970
16	WORCESTER	ASSATEAGUE POINTE WWTP	0.06400