

ENR Refinement Program

Background:

Upgrading WWTPs with ENR has been essential for Maryland to meet its nutrient target loads. However, as the BRF program has reached its 20-year anniversary, many ENR related equipment and processes are approaching their useful life. If MDE does not reinvest in the ENR upgrades, the upgraded plants will be at risk of failure, which will lead to Maryland failure to continue to meet its target loads.

Program Goal:

As the ENR upgrades reach their 15th year anniversary, WWTPs should be encouraged to commission a comprehensive engineering evaluation of the whole treatment system to identify improvements needed to allow ENR operation to continue for another 20 years with a new ENR goal of 2.85 mg/l in total nitrogen to help offset the climate change impact. This program is not intended to be a maintenance program to replace equipment as needed. The new project life cycle must be another 20 years.

ENR Refinement Process and Procedures:

- Upgraded WWTPs should become eligible for ENR refinement grant 15 years or more after the completion of the original upgrade. This would allow for the planning, design and construction before the original upgrade is 20 years.
- WWTPs must complete a comprehensive engineering evaluation of the existing ENR system and provide recommendations for upgrade to allow the WWTPs to achieve ENR for another 20 years.
- MDE may fund the engineering evaluation at 100%. MDE may require a funding application through WIFA for the engineering evaluation.
- Only the Conditions of MDE Grant Award are needed for the BPW to fund the engineering evaluation.
- Upon completion of the engineering evaluation, a preliminary eligibility determination will be completed by MDE using the existing program guidelines.

- Upon receipt of the preliminary eligibility determination, the WWTP owner can decide whether or not to accept BRF funding with the new total nitrogen (TN) goal for the proposed upgrade. Alternatively, the upgrade can be funded by SRF loan only without the new goal.
- If the owner accepts BRF funding, a new ENR agreement will be made with the new TN goal of 2.85 mg/l to help offset the climate change impact. The owner will then apply to WIFA during the regular solicitation process to fund the design and construction through BRF.
- BRF funding cannot be provided if the WWTP is required by the discharge permit to achieve less than 3 mg/l TN due to expansion.
- Design costs will be prorated based on the eligibility percentage. Previously, we funded the design cost for minor WWTP at 100% because after completion of the design, MDE could have decided not to proceed with funding the project based on the cost effectiveness criteria. However, since these WWTP have already received ENR limits in the discharge permit, not proceeding with a refinement project is not an option without risking non-compliance.
- The BRF funded project can proceed using the existing program procedures.
- The annual BRF O&M grants will continue to be based on the original goal of 3 mg/l TN providing additional incentives for those facilities that have agreed to the new goal of 2.85 mg/l or less.