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## **Maryland Department of the Environment**

### **Integrated Project Priority System for Water Quality Capital Projects Point Sources and Nonpoint Sources**

#### **Overview**

This document outlines the criteria and procedures used by Maryland Water Quality Financing Administration (MWQFA) for rating and ranking water quality improvement capital projects to develop an annual Project Priority List (PPL) that will be used to select projects for financial assistance under the following MDE Programs:

- [Water Quality Revolving Loan Fund \(WQRLF or WQSRF\)](#)
- [Bay Restoration Fund \(BRF\) Wastewater Grant](#)

Based on project ranking and/or disadvantaged community status, an applicant may be eligible for State grant and/or additional subsidy under the WQRLF program (i.e., loan principal forgiveness). For further information about eligibility for WQSRF loan principal forgiveness and State grant, review MDE's "Water Quality Funding Eligibility Chart" on the [MWQFA web page](#).

#### **Threshold Requirements for MDE Funding of Treatment Works Projects<sup>1</sup>**

- 1) The project scope must be included in the MDE approved County Water and Sewerage Plan and
- 2) The project, and the area served by it, must be located within a Priority Funding Area (PFA) or have been granted a PFA exception by the Smart Growth Coordinating Committee (SGCC). Note: Projects funded solely with BRF Wastewater Grant are not subject to PFA law, with the exception of sewer extensions to connect properties served by septic to a BNR/ENR WWTP.

Treatment works projects not meeting the requirements will be scored and ranked, but funding will not be allocated. These requirements do not apply to non-treatment works projects (e.g, stormwater best management practices (BMPs)).

#### **Project Rating Procedure and Criteria**

MWQFA will evaluate each project application using a "project score sheet." The procedure described below contains references to section numbers used on the score sheet. Projects will be rated and ranked on the Project Priority List (PPL) in descending order based on the total points awarded on the score sheet. A maximum of 200 points can be awarded to any project. In case of tied scores, projects will be ranked as follows:

- Stormwater projects will be ranked by the number of drainage acres treated by the project, largest to smallest.
- Stream restoration projects will be ranked by the number of linear feet, largest to smallest.
- Riparian buffer restoration projects will be ranked by the acreage of riparian buffer restored by the project, largest to smallest.

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<sup>1</sup> Projects involving wastewater/sewage collection, conveyance, treatment and disposal, including storm sewers involved in the separation of combined sewer overflows.

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- All other projects will be ranked by the population served by the project, smallest to largest.

### Section I – Water Quality Benefit (Maximum 40 points)

This section relates directly to the multi-State effort to develop the Chesapeake Bay Total Maximum Daily Load (TMDL) and nitrogen reduction efforts statewide. Priority in this section is given to projects with the greatest benefit to the Chesapeake Bay by considering resulting nitrogen reduction and the relative effectiveness (RE) of the nutrient reduction based on the 8-digit watershed where that reduction will take place. RE (calculated as the delivery factor multiplied by the estuarine effectiveness) is a measure of the impact from the edge-of-stream nutrient load from an 8-digit watershed on the dissolved oxygen in the Chesapeake Bay Mainstem. Points in this section will be awarded for the total nitrogen (TN) reduction and RE of that reduction as described in Steps 1 and 2 below.

Step 1. Calculate the resulting estimated TN reduction (lbs/yr) using the appropriate methodology described in the table below:

Project Type	Methodology
WWTP upgrade from secondary to BNR (concentration reduction from 18 to 8 mg/l TN)	Lbs/yr TN Reduction = Design capacity in MGD * 10 mg/l * 8.34 * 365 days per year
WWTP upgrade from BNR to ENR (concentration reduction from 8 to 3 mg/l TN)	Lbs/yr TN Reduction = Design capacity in MGD * 5 mg/l * 8.34 * 365 days per year
WWTP upgrade from secondary to ENR (concentration reduction from 18 to 3 mg/l TN)	Lbs/yr TN Reduction = Design capacity in MGD * 15 mg/l * 8.34 * 365 days per year
Connect minor WWTP to BNR or ENR facility	Use appropriate calculation above, except substitute existing flow to be connected in MGD for existing design capacity in MGD
Sewer extension to connect existing structures on septic to secondary WWTP	Lbs/yr TN Reduction = 9.5 lb/yr * number of existing Equivalent Dwelling Units (EDUs) <sup>2</sup> to be connected
Sewer extension to connect existing structures on septic to BNR WWTP	Lbs/yr TN Reduction = 17.1 lb/yr * number of existing EDUs <sup>2</sup> to be connected
Sewer extension to connect existing structures on septic to ENR WWTP	Lbs/yr TN Reduction = 20.9 lb/yr * number of existing EDUs <sup>2</sup> to be connected
Installation of Best Available Technology at shared community septic system	Applicant to provide calculation of existing load – projected load from BAT
Stormwater management BMP	Use the “Non-Point Source Load Reduction Calculator” under the “Associated Documents” heading on the <a href="#">WQFA webpage</a> to calculate reductions.
Stream restoration	Length of stream to be restored in linear feet (as measured down center of stream) * 0.202
Riparian buffer restoration	Acreage of riparian zone to be permanently restored with Maryland native tree and plant species * the appropriate multiplier from the list below: - Crop to Riparian Forest Buffer = 35.84 - Pasture to Riparian Forest Buffer = 24.53 - Hay to Riparian Forest Buffer = 22.05 - Turf to Riparian Forest Buffer = 14.34 - Mixed Open to Riparian Forest Buffer = 9.1
Shoreline erosion control (e.g., living shoreline)	0.73 * Tons of sediment eroded from project site per year (sediment tonnage is calculated as follows: [length of shoreline in ft * bank height in ft * historic rate of erosion in ft/yr * 120]/2000)

<sup>2</sup> When existing structures to be connected aren't traditional EDUs (single-family homes), use the following formula to calculate the “flow-equivalent EDU” for use in the equation: septic design flow (gpd) ÷ 195 gpd/EDU (e.g., 1,635 gpd ÷ 195 gpd/EDU = 8.4 EDU).

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Twenty-five (25) points will be awarded to projects resulting in a “high” TN reduction (greater than 2,000 lbs/year), which is approximately equivalent to no smaller than a 45,000 gpd WWTP upgrading to ENR, a 96 home community on septic tanks connecting to an ENR WWTP, installation of stormwater infiltration practices in A/B soils with sand and vegetation (but no underdrain) to treat runoff from 468 drainage acres in a medium density residential area, or restoration of native tree and plant species on a minimum of at least 56 up to 220 acres of riparian buffer zone (based on previous land use).

Fifteen (15) points will be awarded to projects resulting in a “medium” TN reduction (greater than 1,000 lbs/year but less than or equal to 2,000 lbs/year), which is approximately equivalent to no smaller than a 22,000 gpd WWTP upgrading to ENR, a 48 home community on septic tanks connecting to an ENR WWTP, installation of stormwater infiltration practices in A/B soils with sand and vegetation (but no underdrain) to treat runoff from 234 drainage acres in a medium density residential area, or restoration of native tree and plant species on a minimum of at least 28 up to 110 acres of riparian buffer zone (based on previous land use).

Five (5) points will be awarded to projects resulting in a “low” TN reduction (greater than 0 lbs/year but less than or equal to 1,000 lbs/year)

### Step 2.

Determine the RE of TN reduction resulting from the project by confirming the 8-digit watershed where the reduction will take place (for point source projects, this is the 8-digit watershed where the point of discharge is located; for nonpoint source projects, this is the 8-digit watershed where the project is located). Identify the corresponding RE for that 8-digit watershed in the “TN\_RelEffect” column of the most current RE spreadsheet provided by MDE’s Water and Science Administration (WSA).

Fifteen (15) points will be awarded to projects located in (or discharging to) an 8-digit watershed in which the TN reduction is “most effective” (RE greater than 7.5).

Fifteen (15) points will be awarded to projects located in (or discharging to) one of the Maryland Coastal Bays Watersheds that help develop and implement a comprehensive conservation and management plan under §320 of the Clean Water Act.

Ten (10) points will be awarded to projects located in (or discharging to) an 8-digit watershed in which the TN reduction is “more effective” (RE greater than 5.5 but less than or equal to 7.5).

Five (5) points will be awarded to projects located in (or discharging to) an 8-digit watershed in which the TN reduction is “moderately effective” (RE greater than 3.5 but less than or equal to 5.5).

Add the points awarded in Steps 1 and 2 to yield the Section I score.

### **Section II – Public Health and Safety Benefits (Maximum 40 points)**

This section recognizes projects that address the public health and safety hazards posed by water quality problems, flooding, and climate change. Points are awarded in only one category. If more than one is applicable, the higher of the points will be awarded.

Forty (40) points will be awarded to a project that mitigates a documented public health emergency or confirmed repeated contamination of a drinking water supply by E. coli, fecal coliform, or nitrate above drinking water Maximum Contaminant Level (MCL), as confirmed by documentation submitted by the applicant (e.g., lab report, environmental health department inspection report, specific reference in an administrative/judicial/consent order).

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Twenty-five (25) points will be awarded to a project that mitigates confirmed repeated contamination of surface water, groundwater, or a drinking source water supply (other than as noted above), as confirmed by documentation submitted by the applicant (e.g., lab report, environmental health department inspection report, specific reference in an administrative/judicial/consent order).

OR

Twenty-five (25) points will be awarded to a [CWSRF-eligible](#) stormwater project that provides flood control and assists in mitigating repeated flooding events (more than once in a five year period) that threaten public safety, as confirmed by documentation submitted by the applicant (this can include FEMA maps, studies, etc).

Ten (10) points will be awarded to a project that can be presumed to mitigate public health and safety hazards posed by water quality problems, flooding, and climate change. (explanation, but no documentation, required).

### **Section III – Water Quality/Public Health Compliance (Maximum 20 points)**

This section acknowledges water quality projects being undertaken in accordance with a compliance requirement. Points are awarded in only one category. If more than one is applicable, the higher of the points will be awarded.

Twenty (20) points will be awarded to a project that is required by a final administrative or judicial order, as supported by documentation submitted by the applicant and confirmed by MDE WSA's Compliance Program.

Ten (10) points will be awarded to a project which can be credited towards a Municipal Separate Storm Sewer System (MS-4) Permit, as supported by documentation submitted by the applicant and confirmed by MDE WSA's Stormwater Program.

Ten (10) points will be awarded to a project that is required to achieve new (more restrictive) limits in a National Pollutant Discharge Elimination System (NPDES) or State Groundwater Discharge permit, as supported by documentation submitted by the applicant and confirmed by MDE WSA's Wastewater Permits Program.

Ten (10) points will be awarded to a project that is required to repair a dam that is unsafe or at risk of imminent failure, as supported by documentation submitted by the applicant and confirmed by MDE WSA's Dam Safety Program, provided that the project protects downstream water quality.

Ten (10) points will be awarded to a project which can be credited towards

- The Chesapeake Bay Total Maximum Daily Load (TMDL) and is consistent with a [Local Area Sector Goal](#), as confirmed by documentation submitted by the applicant (project must be located within – or discharging to - the Chesapeake Bay Watershed to be eligible for these points); or
- The Comprehensive Conservation Plan for Maryland's Coastal Bays, as confirmed by documentation submitted by the applicant (project must be located within – or discharging to - [Maryland's Coastal Bays Watershed](#) to be eligible for these points); or
- A TMDL completed for an 8-digit basin listed as impaired by Total Nitrogen, Total Phosphorus, sediments, bacteria, and/or temperature as supported by documentation submitted by the applicant and confirmed by a listing category of 4a in the [current final Integrated Report of Surface Water Quality](#) (project must be located within – or discharging to – the impaired basin for

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which the TMDL was completed and serve to curtail the pollutant to be eligible for these points);  
or

- Addressing a listing category of 4c in the [current final Integrated Report of Surface Water Quality](#) where the biological integrity is stressed by stream channelization or lack of riparian buffer as supported by documentation submitted by the applicant and confirmed by the Integrated Report (project must be located within – or discharging to – the impaired basin and be for curtailing/ removing channelization or planting riparian buffers to be eligible for these points).

#### **Section IV – Nitrogen Removal Cost Efficiency (Maximum 30 points)**

This section gives priority to the most cost-efficient projects per pound of nitrogen reduced. For points to be awarded in this section, the project must be of a type listed in Section I. Nitrogen removal cost efficiency in this section is calculated as:

(Total project cost \$/20 years)/lb per year TN reduction calculated in Step 1 of Section I

Thirty (30) points will be awarded to projects with a “low” annualized capital cost \$/lb per year (less than or equal to \$50/lb TN per year).

Fifteen (15) points will be awarded to projects with a “medium” annualized capital cost \$/lb per year (greater than \$50/lb TN per year but less than or equal to \$100/lb TN per year).

Projects with a “high” annualized capital cost \$/lb TN per year (greater than \$100/lb TN per year) will not be awarded points in this section.

#### **Section V – Co-Benefits (Maximum 70 points)**

Points awarded for all applicable with 70 points maximum.

##### Climate Mitigation, Adaptation and Resiliency

Ten (10) points will be awarded to a project that increases the resilience of treatment works to manmade or natural disasters, such as extreme weather events and sea-level rise. These projects include those shown on page 8 of the “[Overview of CWSRF Eligibilities](#)” document and connection of septic systems in the Critical Area (i.e., all land within 1,000 feet of Maryland’s tidal waters and tidal wetlands) to a public sewer as supported by explanation and – for septic connections - a Critical Area map clearly showing the Critical Area boundary and the septic systems within to be connected.

Ten (10) points will be awarded to a project that will provide for an energy use reduction or alternate energy generation, as supported by calculations provided by the applicant.

Ten (10) points will be awarded to a project consolidating two or more systems, as supported by explanation.

The following points will be awarded to a project that is being undertaken by a community that can demonstrate it is rated in the [National Flood Insurance Program’s Community Rating System](#):

- Class 6 or lower: Ten (10) points
- Class 7 or higher: Five (5) points

The following points will be awarded to a project that will reduce risk of flood or coastal hazards in communities within counties identified as “at risk” per the regional risk maps in Section II of the [2016 State Hazard Mitigation Plan](#):

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- Project in an area of high risk to flood or coastal hazards: Ten (10) points
- Project in an area of medium-high or medium risk to flood or coastal hazards: Five (5) points

### Sustainability

This section gives priority to projects that provide for “sustainable development” – development that, per the U.N. World Commission on the Environment and Development, “meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Ten (10) points will be awarded to a project that benefits the needs of the existing community:

- Expansion less than 20% EDU growth (or increase in design capacity for sewerage projects, including “decentralized” wastewater treatment systems), or
- Expansion greater than 20% growth is for new development or redevelopment to support sustainable community (i.e., proximity to a transit station, a [Base Realignment and Closure \(BRAC\) Revitalization and Incentive Zone](#), a Brownfield revitalization area, a [Department of Housing and Community Development \(DHCD\)-designated Sustainable Community](#), or a [DHCD-designated Maryland Main Street](#))

Ten (10) points will be awarded to a project located in a [designated Maryland Environmental Benefits District](#).

Ten (10) points will be awarded to a project that provides for reuse/recycling of stormwater, wastewater, or treatment products (e.g., biosolids/biogas for energy generation, treated effluent or stormwater reuse etc.).

Ten (10) points will be awarded to a project to which funding from another agency (e.g., USDA Rural Development, MD DHCD Community Development Block Grant, EPA WIFIA, Department of Natural Resources, FEMA/EMMA) is confirmed in writing as committed funding or pending.

### Public Participation

A 30-day public comment period for Draft Revision 5 IPPS began on October 21, 2020 and ended at midnight on November 19, 2020. Draft Revision 5 was emailed to MWQFA’s contact list at the start of the comment period and posted for the full 30 days on [MWQFA’s website](#).

Comments on Draft Revision 5 IPPS were accepted via e-mail to [elaine.dietz@maryland.gov](mailto:elaine.dietz@maryland.gov). Questions were directed to Elaine Dietz at 410-537-3908 or [elaine.dietz@maryland.gov](mailto:elaine.dietz@maryland.gov). All comments were included in a responsiveness summary, which was submitted along with the final document to the U.S. Environmental Protection Agency and to those who submitted comments.