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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
- Biological Nutrient Removal (BNR) Grant

Based on project ranking and/or disadvantaged community status, an applicant may be eligible for partial State grant 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.

The WQRLF Program can provide below-market interest rate loans up to 30-year term (based on the asset's useful life) and loan principal forgiveness (as additional subsidy) to finance the following types of capital projects:

- Publicly-owned treatment works projects, such as advanced wastewater treatment (BNR or ENR); combined sewer overflow (CSO)/sanitary sewer overflow (SSO) correction; storm sewers involved in the separation of CSOs; aging sewer system rehabilitation or replacement; sewer extension to sewerage treatment facilities for failing septic system communities; non-hazardous landfill leachate conveyance and/or treatment; sewer system energy conservation; sewerage system security; water conservation/efficiency/reuse.

- Publicly or privately-owned non-treatment works projects to manage, reduce, treat, or recapture stormwater or subsurface drainage water, such as best management practices (BMPs) required by Municipal Separate Storm Sewer System (MS4) permits, Stormwater General Discharge Permit (e.g., 12SW, 14GP, etc.), and non-hazardous solid waste landfill capping. Note: WQRLF eligible nonpoint source pollution prevention practices identified under Federal Clean Water Act Section 319 Plan for Maryland (see list below) may also be funded through the MWQFA Linked Deposit (Bank Loan) Program.

    a. Landfill leachate collection, storage and treatment;
    b. Non-hazardous landfill capping and closure;
    c. Highway deicing material storage facilities;
    d. Remediation of contamination from leaking storage tanks, underground injection wells, and inactive hazardous waste sites;
    e. Stormwater management and BMPs;
    f. Stream bank stabilization;
    g. Shoreline erosion control;
    h. Restoration/establishment of riparian vegetation, wetlands and other water bodies;
    i. Land purchase or conservations easements for water quality protection of wellheads or watersheds;
    j. Correction of failing septic systems;
    k. Agricultural Best Management Practices; and
    l. Energy Efficiency, Renewable Energy and Distributed Generation for selected purposes.

For additional information on Linked Deposit bank loans, please go to the MWQFA web page.

MWQFA will identify capital projects submitted for WQRLF financing that meet U.S. Environmental Protection Agency (EPA)'s definition of "green" projects (i.e., green infrastructure, water efficiency, energy efficiency/climate change, environmentally innovative). For information and examples of EPA-defined "green projects," please go to the MWQFA web page.

Threshold Requirements for MDE Funding of Treatment Works Projects

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 by BRF Wastewater and/or BNR Grant are not subject to PFA law.

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 PPL in descending order based on the total points awarded on the score sheet. A maximum of 100 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 restored by the project, largest to smallest.
- All other projects will be ranked by the population served by the project, smallest to largest.

Section I – Water Quality or Public Health Benefit (Maximum 40 points)

After determining the project meets the eligibility requirements, the reviewer will score Section I-A (Nitrogen Reduction Benefit) and Section I-B (Public Health Benefit). **Points in this section will be awarded based on the higher of the two scores (I-A or I-B)**.

Section I-A – Nitrogen Reduction Benefit. 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 analysis calculated as described in Steps 1 and 2 below. Maximum 40 points.

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 homes on septic to secondary WWTP	Lbs/yr TN Reduction = 9.5 lb/yr * number of existing homes to be connected
Sewer extension to connect homes on septic to BNR WWTP	Lbs/yr TN Reduction = 17.1 lb/yr * number of existing homes to be connected
Sewer extension to connect homes on septic to ENR WWTP	Lbs/yr TN Reduction = 20.9 lb/yr * number of existing homes 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 "Nonpoint Source Load Reduction Calculator" to calculate reductions.
Stream restoration	Length of stream to be restored in linear feet (as measured down center of stream) * 0.202
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)

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, or 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.

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, or 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.

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 Science Services Administration.

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).

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).

Ten (10) points will be awarded to projects located in (or discharging to) one of the Maryland Coastal Bays watersheds.

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).

Step 3 – Add the points awarded for TN reduction in Step 1 and for TN relative effectiveness in Step 2.

Section I-B – Public Health Benefit. This section recognizes projects that address the public health hazards posed by water quality problems. Maximum 40 points.

Forty (40) points will be awarded to a project that mitigates a 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.

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.

Ten (10) points will be awarded to a project that mitigates other public health concerns associated with limited risk/exposure, other than the above.

Compare the total points calculated for Nitrogen Reduction Benefit (I-A, Step 3) against the points calculated for Public Health Benefit (I-B). **Award the higher of the two as the subtotal for Section I.**

Section II – Water Quality/Public Health Compliance Status (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. Maximum 20 points.

Twenty (20) points will be awarded to a project that is required by a final administrative or judicial order, as confirmed by an appropriate MDE program (e.g., Water Management Administration'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 confirmed by documentation submitted by the applicant and/or MDE Water Management Administration's Sediment Stormwater and Dam Safety 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 confirmed by documentation submitted by the applicant and/or MDE Water Management Administration Wastewater Permits Program.

Ten (10) points will be awarded to a project which can be credited towards a local Watershed Implementation Plan (WIP) for the Chesapeake Bay Total Maximum Daily Load.
Ten (10) points will be awarded to a project that benefits the water quality of Maryland Coastal Bays, as confirmed by the Comprehensive Conservation Plan for Maryland's Coastal Bays.

Section III – Nitrogen Removal Cost Efficiency (Maximum 30 points)

This section gives priority to the most cost-efficient projects per pound of nitrogen reduced. 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-A

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 IV – Sustainability Benefit (Maximum 10 points; total of Sections IV-A thru IV-D.)

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."

Three (3) points will be awarded in Section IV-A to a project that benefits the needs for existing sustainable community:

- Expansion less than 20% EDU growth or increase in design capacity for sewerage projects, including "decentralized" wastewater treatment systems, or

- Expansion 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)

Three (3) points will be awarded in Section IV-B 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.).

Two (2) points will be awarded in Section IV-C to a project located in a designated Maryland Environmental Benefits District.

Two (2) points will be awarded in Section IV-D to a project that will provide for an energy use reduction or alternate energy generation.

Public Participation

The draft IPPS was posted on MWQFA's web site and was also emailed to Maryland local governments notifying them of a 30-day public comment period starting September 14, 2016. The draft IPPS was the subject of a public hearing on October 14, 2016 at 10:00 AM at the Maryland Department of the Environment (Terra Conference Room, 1st Floor Lobby), 1800 Washington Boulevard, Baltimore, Maryland 21230. The public hearing record closed on October 21, 2016. Comments on this draft IPPS (Revision 3) were submitted in-person at the public hearing and/or via e-mail, fax, or mail. Questions were directed to Elaine Dietz at 410-537-3908 or elaine.dietz@maryland.gov. All comments were included in a responsiveness summary, which was provided to those who submitted comments.