Maryland
Department of the Environment

MARYLAND WATER INFRASTRUCTURE FINANCING ADMINISTRATION
CLEAN WATER STATE REVOLVING FUND PROGRAM
FEDERAL FISCAL YEAR 2026
FINAL INTENDED USE PLAN

October 2026

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Maryland Water Infrastructure Financing Administration
Final Federal Fiscal Year 2026 Intended Use Plan
Maryland Clean Water State Revolving Fund

EXECUTIVE SUMMARY

The Intended Use Plan (IUP) is the document that the Maryland Water Infrastructure Financing Administration (MWIFA) submits to the United States Environmental Protection Agency (EPA) to request the Federal Fiscal Year (FFY) 2026 Capitalization Grant under the Clean Water Act (CWA) for use in the Maryland Clean Water State Revolving Fund (CWSRF). The Maryland CWSRF was established pursuant to the CWA of 1987 and the Maryland Water Quality Financing Administration Act, Title 9, Subtitle 16 of the Environment Article, Annotated Code of Maryland, to provide below market interest rate loans and other subsidies to local governments and eligible private entities for certain water quality capital projects.

In addition, in 2021, the Infrastructure Investment and Jobs Act (IIJA) provided a General Supplemental allotment and an Emerging Contaminants (EC) allotment to the Water Quality SRF Program. This IUP is also the document that MWIFA submits to EPA to request Maryland's annual allotments from these appropriations.

The State of Maryland is committed to using the capitalization grant funds (capitalization grants) for which MWIFA is applying to provide funding for eligible water quality improvements from point and nonpoint source capital projects, including eligible green projects, that will further the water quality and public health objectives of the CWA.

For FFY26, MWIFA is making grant applications to receive:

1. Base CWSRF Capitalization Grant allotment for a total of $17,275,000, to be matched with $3,455,000 (20%) in State funds as required.

2. IIJA CWSRF General Supplemental Capitalization Grant allotment of $59,581,000, to be matched with $11,916,200 (20%) in State funds as required.

3. IIJA CWSRF EC Capitalization Grant allotment of $5,143,000.

4. IIJA EC federal FFY23 reallotment of $12,000.

Note: MWIFA did not receive any applications for the CWSRF EC allotment, so those funds once awarded to MWIFA will be transferred to the Drinking Water SRF (DWSRF) Program where numerous applications have been submitted, and great need has been shown.

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The highlights of the FFY26 IUP are as follows:

Exhibit 1: FFY26 IUP Summary

CW SRF FFY26 IUP TOTAL SOURCES		CWSRF FFY26 IUP TOTAL USES	
Federal Funds for Capital Projects-Base Grant	$ 17,275,000	Capital projects - Loans and Grants	$ 287,490,512
State Match for Base for Capital Projects	$ 3,455,000	SRF Revenue Bond Debt Service (P&I)	$ -
Federal Funds for Capital Projects-IIJA	$ 59,581,000	CWSRF Transfer to DWSRF	$ 5,155,000
State Match for IIJA for Capital Projects	$ 11,916,200	Transfer to Admin (WRRDA provision)	$ 3,900,000
Federal Funds for Capital Projects-IIJA	$ 5,155,000	EPA In-Kind Funding for CWNS Contractor	$ 500,000
Est. Invest. Earnings/Repayments	$ 117,965,287		
Prior IUP Reprogrammed Funding	$ 85,000,000		
TOTAL	**$ 300,347,487**	**TOTAL**	**$ 297,045,512**

Under this IUP, $287,490,512 of the FFY26 capitalization grant allotments, inclusive of 20% state match contribution, is allocated toward clean water capital projects. MWIFA does not request the federal (4%) funds for CWSRF program administration, as it will continue to use loan administrative fees (see below) and funds from the CWSRF as authorized under the Water Resources Reform and Development Act of 2014 (WRRDA), if needed.

To provide applicants with an opportunity to seek CWSRF funding, Financial Assistance Applications for CW (point source and nonpoint source) capital projects were accepted by MWIFA from December 1, 2025, through February 7, 2026. The attached IUP Table shows the proposed list of projects for inclusion in the FFY26 IUP for CWSRF financial assistance, including those projects that are being considered for an additional subsidy (loan principal forgiveness) based on the assumed federal statutory limitations. These projects were selected from the Project Priority List (PPL) based on their Integrated Project Priority System (IPPS) ranking, readiness to proceed to construction, and compliance with the following two state requirements: (1) the project (if a treatment works project) is included in, or amended to, an MDE-approved County Water and Sewer Plan, and (2) the project (if a treatment works project) is consistent with Maryland's Smart Growth/Priority Funding Area (PFA) legislation or has received a PFA exception. Before loan execution, projects identified in the IUP will undergo a detailed financial capacity/credit analysis by MWIFA. Below we detail CWSRF loan terms, which are applicable to all CWSRF loans except for loans through the Linked Deposit Program (see Section B-2 for additional information).

Current Interest Rate	Standard Rate = 50% of Market Rate Disadvantaged Community (DAC) Rate = 25% Market Rate • Market Interest Rate is defined as the average of the Bond Buyer 11-Bond Index for the month preceding the loan closing. • MDE, by policy, can change the SRF loan interest rate at any time. • Interest rates are updated monthly; the range of rates for the prior fiscal year are posted on the MWIFA website.
Loan Term	Up to 30 Years, not to exceed useful life of the constructed asset. 100% principal forgiveness loans have a duration of 10 years, regardless of the life of the asset.
Loan Origination Fee	None.
Loan Administrative Fee	5% of the aggregate debt service divided by the number of administrative fees payments over the life of the loan, collected annually. The administrative fee is used to help meet program operating expenses. These funds are in addition to any funds provided for CWSRF program expenses from the federal capitalization grants. If the loan administrative fee is insufficient to cover program operating expenses, the additional amount needed will be transferred from the program total net position, up to 0.2% of net asset limit authorized under WRRDA in accordance with FWPCA section 603(d)(7). Per the most recent finalized audited financial statements (period ending 06/30/2025), the maximum amount allowed is $3.81 Million (total net position of $1.906 Billion × 0.002 = $3.81 Million). Audited financials for period ending 06/30/2026 are not yet available. As the fund's net position continues to grow annually, Maryland projects the limit to reach $3.90 Million for SFY26.

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Maryland Clean Water State Revolving Fund

A. Sources and Uses of Funds

Exhibit 2: FFY26 Sources and Uses*

	Notes	Through 2025 IUP	2026 IUP
SOURCES			
Federal Capitalization Base Grants	A	$ 1,194,070,380	$ 17,275,000
Federal Stimulus Grants 08 IUP (ARRA)		$ 94,784,600	$ -
20% State Match to Base Grant	B	$ 238,972,687	$ 3,455,000
Federal IIJA-General Supplemental Grant		$ 208,042,000	$ 59,581,000
20% State Match to IIJA Federal Grant	C	$ 22,362,500	$ 11,916,200
Funds Transferred to DW SRF EC and 2023 Reallotment		$ 17,957,000	$ 5,155,000
Total Revenue Bond Proceeds		$ 236,222,390	$ -
Investment Earnings thru SFY 25		$ 213,193,010	$ -
Loan Principal Repayments thru SFY 25		$ 1,784,281,289	$ -
Loan Interest Repayments thru SFY 25		$ 353,581,696	$ -
Subtotal		**$ 4,363,467,553**	**$ 97,382,200**
Estimated Loan Principal (SFY26, SFY27)		$ 115,539,303	$ -
Estimated Loan Interest Repayments (SFY26, SFY27)		$ 27,423,204	$ -
Estimated Investment Earnings (SFY26, SFY27)		$ 19,440,036	$ -
Estimated Loan Principal (SFY28)		$ -	$ 95,567,690
Estimated Loan Interest Repayments (SFY28)		$ -	$ 13,639,119
Estimated Investment Earnings (SFY28)		$ -	$ 8,400,000
Estimated Cumulative Linked Deposit Invest. Prin repays thru SFY28		$ 19,382,590	$ 358,478
Reprogrammed Funding		$ 1,575,101	$ 85,000,000
Subtotal		$ 183,360,234	$ 202,965,287
Total		**$ 4,546,827,786**	**$ 300,347,487**
USES			
Closed Loans and Grants as of 06/30/26		$ 3,641,702,396	$ -
Pending loans and grants programmed in past IUPs as of 06/30/26		$ 756,606,122	$ -
Pending loans and grants programmed in FFY26 IUP		$ -	$ 287,490,512
Net Reversions as of 06/30/26		$ (41,884,830)	$ -
Funds Transferred to Drinking Water SRF		$ 21,187,580	$ 5,155,000
Bond Principal Repaid as of 06/30/24		$ 234,607,390	$ -
Bond Interest Expense as of 06/30/24		$ 141,816,425	$ -
Bond Cost of Issuance/Underwriter Discount		$ 4,949,910	$ -
ARRA-Stimulus Administrative Expense		$ 2,000,000	$ -
4% Administrative Expensed as of 06/30/24		$ 16,935,812	$ -
2% Admin. Exp. IIJA_supp Gen. grant thru 06/30/24		$ 1,008,260	$ -
EPA In-Kind (CW Needs survey) Cumul. Base through 06/30/24		$ 104,566	$ 500,000
Transfer to Admin (WRRDA provision) thru 06/30/26		$ 27,400,000	$ 3,900,000
Allocated Non-point Source Projects (Linked Deposit)		$ 23,000,000	$ -
Total		**$ 4,829,433,630**	**$ 297,045,512**

Notes:
[A] Total federal grant awards through FFY25 Capitalization Grant, excludes ARRA, IIJA, and non-SRF grants.
[B] Includes State General Fund/GO Bond Match through FFY25.
[C] Note 10% state match to IIJA federal grant before FFY24.

*Note on Sources & Uses Reconciliation: Total Sources ($300,347,487) exceed Total Uses ($297,045,512) by $3,301,975. This remaining balance represents uncommitted fund availability and will be retained in reserve to finance potential project cost increases/amendments during SFY26 or rolled over to fund eligible projects in future program cycles

B. Goals of the Maryland Clean Water State Revolving Loan Fund

1. Long-Term Goals

Fund Perpetuity & Utilization – To provide low-interest rate financing and other subsidies to high-priority, eligible projects that are ready to proceed within a reasonable time while maintaining a perpetual source of capital funds for future projects. The goal is to achieve a fund utilization rate (loans executed/total funds available) of 98% or greater. This is one Program Activity Measure (PAM) under EPA's strategic plan for the CWSRF. CWSRF could finance approximately $300 Million in additional loans from capitalization grants, State match, IIJA Supplemental capitalization grants, loan repayments, and investment earnings for the FFY26 IUPs (excluding revenue bond leveraging). This is in addition to the $4.55 Billion capacity of existing IUPs (through FFY25). This analysis reflects a Maryland Federal Capitalization Grant of approximately $17.28 Million per year, as well as an annual IIJA General Supplemental Capitalization Grant of approximately $59.58 Million per year through FFY26. The cumulative loan financial capacity of CWSRF is projected to be over $4.85 Billion by FFY26.

Funding Prioritization – The IPPS rating and ranking system targets financial assistance to projects that help meet Maryland's Final Watershed Implementation Plan (WIP) to address the Chesapeake Bay Total Maximum Daily Load (TMDL), as well as federal requirements to limit human exposure to perfluoroalkyl and polyfluoroalkyl substances (PFAS) and other emerging contaminants in the environment. The IPPS focuses on the proposed project water quality benefits, documented public health concerns, relative effectiveness of nutrient reduction to the Chesapeake Bay, compliance status, cost efficiency, and co-benefits including mitigation, adaptation, resiliency, and sustainability.

Reasonable User Cost – To ensure projects are constructed at a reasonable cost for the users of the system, MWIFA will continue to provide disadvantaged communities (DACs) a lower interest rate and additional subsidies in the form of loan principal forgiveness. MWIFA will continue to utilize its state grant programs and coordinate with other federal and state financial assistance programs (e.g., USDA Rural Utilities Service, Community Development Block Grant, Federal Special Appropriation grants, etc.). Reasonable cost is based on the following economic metrics: (1) percent poverty, (2) unemployment, (3) median household income, and (4) population decline. (See below for additional details.)

Financial Capacity and DAC Assistance – As part of the credit/financial analysis of potential borrowers, MWIFA will continue to provide financial advisory services to system owners on the feasibility of their user rate structure and financial capacity to pay back a loan. MWIFA's financial model forecasts future operating cash flow based on existing/proposed user rates using audited financial statements and includes a 2% inflation factor for all projected out years. The model has been an effective tool to assist communities in developing affordable user rate structures and in determining additional subsidies to DACs.

2. Short-Term Goals/FFY26 IUP Operating Goals

Finance Advanced Treatment at WWTPs for Nutrient Reduction – To provide low-cost financing to local governments for the local share, in tandem with Maryland's Bay Restoration Fund Wastewater Program (BRF Wastewater) grant funding for Enhanced Nutrient Removal (ENR), to upgrade targeted wastewater treatment facilities with advanced treatment to reduce nitrogen and phosphorus discharges as part of Maryland's WIP. Maryland's far-reaching legislation (Bay Restoration Fund), which was signed into law in the 2004 Maryland legislative session (amended in 2012 to increase the fee from $2.50/month per equivalent dwelling to $5.00) to address Bay restoration, created a dedicated fund to initially upgrade the 67 largest wastewater treatment plants to ENR standards. ENR upgrades at Maryland's largest 67 wastewater treatment plants are proving to reduce 8.2 million pounds of nitrogen and 945,971 pounds of phosphorus from entering the Bay each year, which is required for Maryland to meet its load cap under the Chesapeake Bay TMDL. Maryland has been encouraging the upgrade of minor wastewater treatment plants to ENR, which was cost-effective. ENR projects are expected to receive up to 100% state grants for ENR eligible components. Some non-eligible ENR components can be covered by CWSRF loans.

Utility and Community Sustainability – To provide low-cost capital financing to local governments for existing facility (fix-it-first) upgrades for water quality improvements necessary to achieve or maintain permit compliance. The FFY26 IUP funding list identifies several such projects. In addition, MWIFA continues to work closely with facility owners to maintain system financial capacity. MWIFA's credit capacity analysis includes discussions with potential loan recipients to ensure that their enterprise fund remains fiscally solvent. Fiscal solvency includes reliable and dedicated sources of revenue for the debt service on capital improvements and the cost of operations and maintenance. Projects that support community sustainability such as proximity to transit, brownfield revitalization, and/or community legacy areas and those that provide for reuse/recycling of stormwater, wastewater, or treatment products are awarded sustainability points on the project rating system.

Green Infrastructure, Water and Energy Efficiency and Environmental Innovation Projects – MWIFA has actively solicited "green" projects to be included in the FFY26 IUP for funding to help restore Maryland's waterways as part of the larger Chesapeake Bay restoration goals. Green projects are integral to the innovative approach Maryland has taken through the Chesapeake Bay WIP to address water quality issues throughout the Maryland portion of the Bay watershed. Three projects on the IUP are identified as green: (1) The Ellicott City Flood Mitigation Pond T-1 project, will receive funds Million from the Base Capitalization Grant; (2) the Little Patuxent Water Reclamation Plant Flow Equalization Improvements project, which will receive funds from the IIJA Supplemental Capitalization Grant; (3) the Montgomery County MS4 Program Additional Funding project, which will receive funds from the Base Capitalization Grant and the IIJA Supplemental Capitalization Grant. Based on the above, the FFY26 IUP currently has met the 10% minimum of the federal capitalization grant award amounts allocated towards green projects. As noted above, MWIFA did not receive any new applications for IIJA CWSRF Emerging Contaminants projects and has decided to transfer the FFY26 allotment and FFY23 reallotment to the DW SRF Program to address urgent needs for PFAS remediation.

Additional Subsidization and Eligible Recipients – The FFY26 Base Capitalization Grant allotment is subject to two distinct and additive authorities requiring that a percentage of the allotment be provided as additional subsidy (e.g., loan principal forgiveness): a mandatory 10% Congressional Additional Subsidy and a mandatory 10% to 30% Clean Water Act Additional Subsidy for a total requirement of 20% to 40%. The FFY26 target is $3,455,000, and MWIFA has provided $4,858,976 in additional subsidization for the Base Capitalization Grant. The FFY26 IIJA General Supplemental allotment requires that 49% of the appropriation must be provided as additional subsidy. The FFY26 target is $29,194,690 and MWIFA has met that target. The FFY23 and FFY26 IIJA Emerging Contaminants allotments require that 100% be provided as additional subsidy. Additional subsidies are provided to eligible projects in priority ranking order with readiness to proceed to construction until the statutory limit is reached. It has been MWIFA's policy to provide additional subsidy in the form of loan principal forgiveness from the Base program to DACs in an amount up to 50% of the financed amount, not to exceed $1.5 Million; however, the Administration reserves the right to revise this policy should circumstances warrant. MWIFA's current DAC eligibility criteria, as approved by EPA, are as follows:

Require at least 2 of the following 4 criteria to qualify as a disadvantaged community:

1. Project is physically located and benefits a community with a poverty level above 110% of the statewide poverty rate; and/or
2. Project is physically located and benefits a community with median household income (MHI) less than 80% of State MHI; and/or
3. Project is physically located and benefits a community with an unemployment rate above 120% of the State unemployment rate; and/or
4. Project is physically located and benefits a community with a change in population < -1.2%.

In addition to above criteria, <u>if the statutory limit for additional subsidy has not been reached</u>, up to 25% of the loan amount as loan principal forgiveness may also be provided to projects in priority ranking order with

readiness to proceed, where the sewer user rate would increase by more than 20% to achieve financial capacity as determined by MDE. Note: No project on FFY26 IUP has been identified for additional subsidy under this section. This may change based on the MWIFA financial review of the borrower undertaken prior to loan closing, which may require user rate increase to achieve financial capacity. An alternative to raising rates, which is exercised at MWIFA's discretion on a case-by-case basis, is to allow the borrower to create a debt service reserve fund to draw from its general fund which can be accessed in the event that the enterprise fund is inadequate to cover the cost of the debt service.

Finance Nonpoint Source (NPS) Projects -- Linked Deposit (LD) – Continue funding privately owned nonpoint source projects using the LD Program. MWIFA is continuing to work with the Department of Agriculture, Farm Credit and other stakeholders to update the LD Program's financing structure. MWIFA has historically purchased a bond from Farm Credit as the financing mechanism for the LD program. Farm Credit is no longer interested in utilizing the bond structure. As a result, MWIFA, MDA and Farm Credit are pursuing other possible funding mechanisms to fund the LD Program. Additionally, the State Treasurer's Office (STO) recently updated their contract with the other private banks that are part of the statewide contract for deposit of state funds. MWIFA has historically invested in CDs with these private banks as the funding mechanism for homeowners and business LD loans. MWIFA continues to develop a new funding mechanism with the STO covered under the statewide contract to be utilized with the eligible private banks. MWIFA continues to have interest in this program from the agricultural community, as well as individual homeowners and businesses. Until the funding structures for the program have been set, MWIFA is not actively advertising this program to potential applicants. Once the funding structures are set, we will again work to provide LD program information through the Department of Natural Resources, Department of Agriculture, Local Soil Conservation Districts, Local Health Departments, and Maryland Department of the Environment (MDE). We will also continue to have information on the LD Program available on the MWIFA website. MWIFA has previously allocated $23 Million of recycled funds (investment earnings/repayments) for eligible private NPS projects to be funded on a first come, first served basis using the LD Program. Based on the current issues with the funding mechanisms, MWIFA will not request new funds for Linked Deposit activity with the FFY26 IUP.

Expand Financing Options to Include Loan Guarantees – State law was amended to expand loan guarantee authority under the Maryland Water Quality Revolving Loan Fund (Ch. 292 of 2021 – Environment – Water Quality Revolving Loan Fund – Uses of Fund). Previously, state law restricted SRF loan guarantees to financing all or a portion of the cost of a wastewater facility. State law was expanded to match all of the allowable uses of loan guarantee authority under federal law. MWIFA did not receive any FFY26 applications to access MWIFA's new guarantee authority.

Explore the Establishment of a Revolving Loan Fund for Land Conservation – State law was amended to emphasize the financing of blue and green infrastructure (Ch. 237 and 238 of 2022 – Conservation Finance Act). One of the items MWIFA is continuing to explore under this new authority is capitalizing a new revolving loan fund for an organization named the Chesapeake Conservancy engaged in land conservation.

Maintain Sufficient Staffing Levels – Given the departure of key staffing elements in early 2025, one of the most important programmatic short-term goals is to build staff back into crucial roles and ensure sustainable program operating levels.

Broaden the Borrowing Base – With recent changes at the federal level, MWIFA is actively engaged in monitoring the risk of loss to federal funds for various programs. Many of the borrowers who are MWIFA's clients rely on these federal dollars to achieve their capital project public health and environmental goals. In times with greater uncertainty, MWIFA must try to broaden the base of loan borrowers to meet the growing needs across all of Maryland; increase the pace at which loans are closed and decrease the number of outstanding projects to which programmed funding has already been committed. These will be operating goals in the coming fiscal year.

C. Project Selection and Fund Activities under the FFY26 IUP

Financial Assistance Applications for water quality projects were solicited by MWIFA from December 1, 2025, through February 7, 2026. Applications received were rated and ranked based on the Clean Water Integrated Project Priority System (IPPS), reviewed for consistency with the State requirements, and identified in the Maryland Clean Water PPL for FFY26/SFY28. This PPL was used to select projects for the FFY26 IUP, based on their priority ranking, applicant's interest in CWSRF financing (including IIJA funding), and readiness to proceed to construction within a reasonable timeframe (unless specifically requesting a planning/design phase loan).

Projects were bypassed in the case that they were not consistent with the following two state requirements: 1) that the project (if a treatment works project) is included in, or amended to, an MDE-approved County Water and Sewer Plan, and/or 2) that the project (if a treatment works project) is consistent with Maryland's Smart Growth/Priority Funding Area (PFA) legislation or has received a PFA exception.

Below is a summary of the sources and uses of funds:

Exhibit 3: FFY26 IUP Summary

CW SRF FFY26 IUP TOTAL SOURCES		CWSRF FFY26 IUP TOTAL USES	
Federal Funds for Capital Projects-Base Grant	$ 17,275,000	Capital projects - Loans and Grants	$ 287,490,512
State Match for Base for Capital Projects	$ 3,455,000	SRF Revenue Bond Debt Service (P&I)	$ -
Federal Funds for Capital Projects-IIJA	$ 59,581,000	CWSRF Transfer to DWSRF	$ 5,155,000
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Federal Funds for Capital Projects-IIJA	$ 5,155,000	EPA In-Kind Funding for CWNS Contractor	$ 500,000
Est. Invest. Earnings/Repayments	$ 117,965,287		
Prior IUP Reprogrammed Funding	$ 85,000,000		
TOTAL	**$ 300,347,487**	**TOTAL**	**$ 297,045,512**

1. Additional Subsidy Requirements

The FFY26 Base Capitalization Grant allotment is subject to two distinct and additive authorities requiring that a percentage of the allotment be provided as additional subsidy (e.g., loan principal forgiveness): a mandatory 10% Congressional Additional Subsidy and a mandatory 10% to 30% Clean Water Act Additional Subsidy for a total requirement of 20% to 40%. The FFY26 target is $3,455,000, and MWIFA has provided $4,858,976 in additional subsidization for the Base Capitalization Grant. The FFY26 IIJA General Supplemental allotment requires that 49% of the appropriation must be provided as additional subsidy. The FFY26 target is $29,194,690 and MWIFA has met that target. The FFY23 and FFY26 IIJA Emerging Contaminants allotments require that 100% be provided as additional subsidy. The attached CWSRF IUP Table identifies borrowers that may qualify as a DAC; however, the extent of subsidy provided (e.g., lower interest rate, loan principal forgiveness) is determined based on the DAC Criteria described in Section B-2 above.

2. Green Project Reserve Requirement

The FFY25 federal appropriation act further specifies that no less than 10% of the Base, IIJA General Supplemental, and IIJA Emerging Contaminants Capitalization Grants each year should be allocated to "green" projects, provided sufficient applications are received. Three projects on the IUP are identified as green: (1) The Ellicott City Flood Mitigation Pond T-1 project, will receive funds from the Base Capitalization Grant, (2) the Little Patuxent Water Reclamation Plant Flow Equalization Improvements project, which will receive funds from the IIJA Supplemental Capitalization Grant; and (3) the Montgomery

County MS4 Program Additional Funding project, which will receive funds from the Base Capitalization Grant and the IIJA Supplemental Capitalization Grant. Based on the above, the FFY26 IUP currently has met the 10% minimum of the federal capitalization grant award amounts allocated towards green projects. As noted above, MWIFA did not receive any new applications for IIJA CWSRF Emerging Contaminants projects and has decided to transfer the FFY26 allotment and FFY23 reallotment to the DW SRF Program to address urgent needs for PFAS remediation.

3. **Administrative Expenses**

All administrative expenditures, including indirect central office costs, personnel overhead, and EPA-approved operational activities were funded exclusively from the dedicated, separate State Loan Administrative Fee Account (supported by the 5% administrative fee on annual debt service and, where necessary, WRRDA-backed transfer authority)

Exhibit 4: Administrative Fund Balance and Program Sufficiency Assessment

Line Item	Amount	Notes / Description
Beginning Admin Fund Balance	$ (74,606.00)	Unencumbered admin fee balance carried forward into SFY26.
(+) Estimated Admin Fee Revenue	$5,200,000.00	Calculated at 5% of annual debt service across active loans.
(+) WRRDA-Backed Transfer Funds	$3,900,000.00	WRRDA funding source drawn if fee revenues are insufficient.
(=) Total Available Admin Funds	**$9,025,394.00**	Total available capital to support administrative operations.
(-) Projected Program Operating Expenses	**$9,000,000.00**	Staffing, indirect costs, equipment, and administrative overhead.
(=) Ending Admin Fund Balance	**$ 25,934.00**	Net reserve remaining at the close of SFY26.
Program Sufficiency Assessment	**$ 25,934.00**	**Status:** While annual loan fee revenue ($5,200,000) alone falls short of projected operating expenses ($9,000,000) by $3,325,394, the utilization of $3,900,000 in WRRDA-backed transfer authority provides total available funding of $9,025,394. This fully covers all operating costs and resolves the negative beginning balance, resulting in a positive ending reserve balance of $25,934.00.

*The primary reason for the initial fund deficit/decrease was the historical misallocation of operational expenses; operating costs have now been re-evaluated and properly allocated to the correct charge codes and verified for eligible program charges.

4. **Program Income (Non-Federal)**

MWIFA charges loan fees equal to 5% of annual debt service. The details related to the program and non-program income revenue and expenses are provided each year in the annual report. During SFY26, MWIFA estimates the revenues to be $5.2 Million.

D. Project Scope of Work/Environmental Benefits – FFY26 IUP Projects

The following are examples of the types of projects selected for financial assistance in the FFY26 IUP. The environmental benefits of each Section 212 project below will be included in the annual report and entered into the OWSRF Clean Water Database upon loan closing.

Wastewater Treatment at the Preserve for Wye Mills in Talbot County aims to rehabilitate the aging treatment facility and help it better withstand intensifying rainfall, flooding, and other extreme weather events. The facility is at the end of its useful life, and failure of any treatment components could result in high concentrations of nitrogen and phosphorus being discharged into local waters, causing a public health risk for its users. The project's scope of work includes rehabilitating the facility's sand filter, replacing its sludge dryer, and replacing aeration equipment, among other areas. In addition to addressing public health issues, the project also provides for recycling wastewater treatment products into biosolids for fertilizer use and helps meet Chesapeake Bay TMDL goals. The project will receive funding from State grants, namely the Maryland Bay Restoration Fund. However, those funds have been capped based on efficiency levels, and fortunately the complementary SRF assistance of $1 Million will fill the gap and allow the project to be completed in order to maintain water quality.

Ellicott City Flood Mitigation Pond T-1. Howard County aims to improve water quality and reduce flooding in old Ellicott City by establishing flood risk reduction facility (FRRF) ponds, performing stream restorations and implementing stormwater best management practices. Ellicott City had originally requested $26.5 Million under the FY25 IUP, however at Ellicott City's request, MWIFA has migrated $20 Million funds to Ellicott City's other projects leaving $6.5 Million for this project. The Ellicott City Flood Mitigation Pond T-1 project receives WIFIA funds as well and is a strong example of co-funding. In addition to reducing flood risk in the historically flood-prone area of old Ellicott City, the vegetation and other aquatic species in the FRRF will process and retain pollutants such as nitrogen or sediment, in turn improving local water quality in the Tiber Branch. The project is one component of Howard County's overall Safe and Sound Flood Mitigation Plan to minimize the potential destruction and loss of life from a future, large flood event like the deadly floods experienced in July 2016 and May 2018 in Historic Ellicott City. The 2016 and 2018 floods in Ellicott City, Maryland were both described as 1,000-year storm events. These were not necessarily events that happen exactly once every 1,000 years, but rather, storms with a 0.1% chance of occurring in any given year. The term "1,000-year storm" is a statistical measure, not a guarantee of frequency. The CWSRF projects are intended to reduce the impacts from such weather events.

Prince George's County, Largo Town Center Pond Enhancement and Dam Mitigation. Responding to MDE compliance inspection findings, the County has requested $750,000 to enter into a planning and design loan (which will be a first for our program). The loan will be for short durations and lead to a constructed project under a separate subsequent construction loan. The project is the result of findings that the dam is classified as High Hazard and, without mitigation, may cause flood damage and further water quality degradation.

E. Minority Business Enterprises/Women's Business Enterprises (M/WBE) Participation

The EPA and MDE negotiated fair share goals for FFYs 2024, 2025, and 2026 based on the Maryland Department of Transportation 2018 disparity/availability study. Based on these negotiations, MDE set goals of 22% MBE and 16% WBE for the "construction" category (total 38% M/WBE). MWIFA will continue to use these negotiated goals for all CWSRF projects funded in the upcoming year.

These goals will be applicable to all projects financed using CWSRF (loans, loan principal forgiveness). MDE provides CWSRF applicants with an insert for inclusion in procurement/bid documents, which outlines the M/WBE (%) goals and the affirmative/positive steps necessary to show a good faith effort consistent with federal regulations under 40 CFR Part 33. Failure to meet the M/WBE goals does not preclude the use of the SRF, as long as the good faith efforts can be demonstrated and documented. It is important that the loan recipients and their prime contractors undertake the necessary affirmative/positive steps to assure that M/WBE firms are afforded the opportunity to participate in SRF projects. All subcontractors selected to participate in the project are also subject to these Good Faith Efforts requirements when further subcontracting or dividing a scope of work. M/WBE Program details and forms are available on MDE's web site at https://mde.maryland.gov/programs/water/WQFA/Pages/mwbe.aspx.

F. Assurances

The Department agrees to comply with the Federal program requirements as outlined in the Operating Agreement between EPA and MDE, amended as of April 2014, and further updated as of February 2016, as well as grant conditions in each Capitalization Grant Agreement.

G. Binding Commitments

The projected binding commitments in the form of an executed loan agreement between MWIFA and the legal borrower will occur at or around the construction start date indicated for each project in the attached CWSRF IUP Table. Prior to the execution of the loan, Maryland law requires that any proposed financing be approved

by the Board of Public Works (BPW), an authoritative three-member fiscal panel comprised of the State's Governor, the Comptroller and the Treasurer. All SRF projects are subject to and must obtain pre-approval by the BPW to encumber the programmed funds, and this is a prerequisite to form a loan agreement or receive a state or federal grant.

H. Public Review of the Draft FFY26 IUP

The public comment period started on July 23, 2026. On that date, MWIFA emailed all applicants who submitted Financial Assistance Applications (and interested parties) to let them know the Draft IUP/PPL was available on MDE's website. The interested parties list includes approximately 1,400 representatives from state and local government, environmental consultants/engineers, community groups, neighborhood associations, environmental organizations and the general public. Additionally, MWIFA emailed the following Maryland Commissions/Committees to share with their membership and interested parties' lists: the Children's Environmental Health and Protection Advisory Council and the Bay Restoration Fund Advisory Committee. MWIFA also coordinated with MDE's Communications Office to ensure that the draft IUP documents are shared via the Department's various social media accounts. MWIFA will share the FFY26 IUP with the Maryland General Assembly.

Public comments were accepted through September 6, 2026. MWIFA was available to answer any questions to ensure the public fully understood what was being proposed in the IUP. MWIFA received three (3) comments for CWSRF IUP. See Appendix C - Public Comment Responsiveness Summary, for all comments received and MDE's actions in response to the comments.

How to Contact MWIFA

Please visit our website for further information about our State and Federal Funding Programs at:

https://mde.maryland.gov/programs/water/WQFA/Pages/index.aspx

If you have questions or wish to have more information, please contact:

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APPENDIX A

Maryland CWSRF Final Project Priority List for FFY26 IUP

State Fiscal Year 2026
(July 1, 2025 – June 30, 2026)

Maryland Water Infrastructure Financing Administration
FY 2026 Clean Water Project Priority List

Version August 7, 2026

Rank / Points	Project Title / Project No.	Problem	Project Description	Applicant	County	Size	Ben. Pop.	Constr. Date	Public?(Y/N)	Compliance?	Disadv.?	PFAS/EC?	Loan Int.?	Funding Request	Total Project Cost	Leg. Dist / Congr. Dist
1 / 145	Piney Orchard SPS & FM / CW0082	Old, failing equipment (including a 2025 switchgear explosion and 5+ overflows) can't meet ENR year-round, and upgrading is too costly.	Install a new pump station and force main to send flow to the Patuxent WRF and ultimately decommission the old plant.	Anne Arundel County, Maryland	Anne Arundel	L	14,979	2026-07-01	Y	N	N	N	Y	$31,140,000	$31,140,000	21 / 3
2 / 140	SC-994 Patapsco WWTP Clarifiers and Thickeners Rehabilitation / CW0006	Badly deteriorated secondary clarifiers and sludge thickeners need rehab to maintain reliable service under a consent decree.	Rehabilitate eight secondary clarifiers and three gravity sludge thickeners with their catwalks and weirs.	Mayor and City Council of Baltimore	Baltimore City	L	1,400,000	2025-07-28	Y	Y	Y	N	Y	$5,533,637	$95,327,486	46 / 2
3 / 140	SC-1032 Activated Plant 3 Rehabilitation at Back River WWTP / CW0086	Aged equipment requires rehabilitation to comply with a consent decree.	Rehabilitate Activated Sludge Plant No. 3 clarifiers and return sludge pump stations 3 and 4.	Mayor and City Council of Baltimore	Baltimore (Co)	L	1,400,000	2027-10-08	Y	Y	Y	N	Y	$70,858,800	$176,899,650	06 / 7
4 / 140	SC-994 Patapsco WWTP Clarifiers and Thickeners Rehabilitation / CW0096	Badly deteriorated secondary clarifiers and sludge thickeners need rehab to maintain reliable service under a consent decree.	Rehabilitate eight secondary clarifiers and three gravity sludge thickeners with their catwalks and weirs.	Baltimore County	Baltimore City	L	1,400,000	2025-07-28	Y	Y	N	N	Y	$19,882,747	$0	46 / 2
5 / 140	SC-1032 Activated Plant 3 Rehabilitation at Back River WWTP / CW0098	Aged equipment requires rehabilitation to comply with a consent decree.	Rehabilitate Activated Sludge Plant No. 3 clarifiers and return sludge pump stations 3 and 4.	Baltimore County	Baltimore (Co)	L	1,400,000	2027-10-08	Y	Y	N	N	Y	$88,449,825	$0	06 / 7
6 / 125	Town of Hancock Wastewater Treatment Plant / CW0025	Effluent violations and a consent decree; the plant cannot meet permit or pending stricter ammonia limits.	Upgrade to ENR with an SBR system and relocate the plant uphill of the existing lagoons.	Town of Hancock	Washington	S	2,120	2027-01-01	Y	Y	Y	N	Y	$4,102,048	$26,731,000	01C / 6
7 / 125	Crisfield Wastewater Treatment Plant Reliability and Compliance Improvements Project / CW0043	Equipment and process deficiencies keep the plant from meeting ENR limits, prompting an October 2025 consent order.	Upgrade the plant—cleaning basins and adding blowers, filters, and pumps—to meet ENR limits and improve nutrient removal.	City of Crisfield	Somerset	S	5,280	2027-04-01	Y	Y	Y	N	Y	$1,985,923	$1,985,923	38A / 1
8 / 125	Crisfield Wastewater Treatment Plant Enhanced Nutrient Removal Evaluation / CW0060	The plant has not been upgraded since 2005 and received an MDE consent order for nutrient noncompliance.	Prepare an engineering study focused on achieving nutrient compliance and ENR performance.	City of Crisfield	Somerset	S	5,280	N/A	Y	Y	Y	N	Y	$275,000	$275,000	38A / 1
9 / 120	Preston WWTP ENR Improvements / CW0020	Poor MLSS mixing prevents the facility from meeting ENR limits and handling high flows, causing permit violations.	Build a new bioreactor tank and install aeration and electrical equipment with related site improvements.	Town of Preston	Caroline	S	775	2027-12-01	Y	N	N	N	N	$3,848,164	$3,848,164	37B / 1
10 / 120	SC-1037 Effluent Filter Rehabilitation at Back River WWTP / CW0004	Aged effluent-filter equipment must be rehabilitated to comply with a consent decree.	Repair and rehabilitate the effluent filter facility at the Back River WWTP sludge blending tanks.	Mayor and City Council of Baltimore	Baltimore (Co)	L	1,400,000	2026-06-01	Y	Y	Y	N	Y	$26,378,200	$101,385,420	06 / 7
11 / 120	SC-1037 Effluent Filter Rehabilitation at Back River WWTP / CW0095	Aged effluent-filter equipment must be rehabilitated to comply with a consent decree.	Repair and rehabilitate the effluent filter facility at the Back River WWTP sludge blending tanks.	Baltimore County	Baltimore (Co)	L	1,400,000	2026-06-01	Y	Y	N	N	Y	$26,378,200	$0	06 / 7
12 / 115	Lake Arbor Pond Enhancement & Dam Mitigation / CW0089	A 2024 MDE inspection rated Lake Arbor Dam high-hazard and unsafe, with cracked concrete, erosion, and clogged drains.	Retrofit the pond/dam and stabilize the embankment, adding five forebays and armoring.	Prince George's County, Maryland	Prince George's	L	0	2028-01-01	Y	Y	N	N	Y	$22,000,000	$22,000,000	24 / 5
13 / 115	Trappe Wastewater Treatment Plant ENR Upgrade / CW0045	The aging WWTP provides only secondary treatment, risking failure and causing pollution exceedances.	Upgrade the facility to ENR standards with new headworks screens, UV disinfection, and filter equipment.	Town of Trappe	Talbot	S	1,308	2026-10-01	Y	N	Y	N	Y	$1,394,111	$14,980,786	37B / 1
14 / 110	SC-996 Back River WWTP Sludge Storage and DAF No. 3 and 4 Renovations / CW0047	Aging sludge-storage and DAF facilities have served beyond their useful life.	Repair and rehabilitate the sludge storage facility and DAF units 3 and 4 to restore full functionality.	Mayor and City Council of Baltimore	Baltimore (Co)	L	1,400,000	2026-12-01	Y	N	Y	N	Y	$60,623,640	$149,738,506	06 / 7
15 / 110	SC-1040 Sludge Loading Facility Rehabilitation at Back River WWTP / CW0090	Most of the building's systems are in poor condition and require immediate repair.	Rehabilitate the Rapid Sludge Building, replacing equipment and upgrading electrical/controls with a code-compliant addition.	Mayor and City Council of Baltimore	Baltimore (Co)	L	1,400,000	2027-01-19	Y	N	Y	N	Y	$12,150,000	$33,632,646	06 / 7
16 / 110	SC-988 Patapsco WWTP Secondary Reactor Rehabilitation / CW0093	The ~50 year-old facilities require significant rehabilitation to reliably meet the NPDES permit.	Repair the concrete structure and update the equipment of the secondary reactors at Patapsco WWTP.	Mayor and City Council of Baltimore	Baltimore City	L	1,400,000	2026-10-01	Y	N	Y	N	Y	$19,315,584	$76,557,800	46 / 2
17 / 110	SC-996 Back River WWTP Sludge Storage and DAF No. 3 and 4 Renovations / CW0097	Aging sludge-storage and DAF facilities have served beyond their useful life.	Repair and rehabilitate the sludge storage facility and DAF units 3 and 4 to restore full functionality.	Baltimore County	Baltimore (Co)	L	1,400,000	2026-12-01	Y	N	N	N	Y	$74,869,253	$0	06 / 7

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18 / 110	SC-1040 Sludge Loading Facility Rehabilitation at Back River WWTP / CW0099	Most of the building's systems are in poor condition and require immediate repair.	Rehabilitate the Rapid Sludge Building, replacing equipment and upgrading electrical/controls with a code-compliant addition.	Baltimore County	Baltimore (Co)	L	1,400,000	2027-01-19	Y	N	N	N	Y	$16,816,323	$0	06 / 7
19 / 110	SC-988 Patapsco WWTP Secondary Reactor Rehabilitation / CW0100	The ~50 year-old facilities require significant rehabilitation to reliably meet the NPDES permit.	Repair the concrete structure and update the equipment of the secondary reactors at Patapsco WWTP.	Baltimore County	Baltimore City	L	1,400,000	2026-10-01	Y	N	N	N	Y	$52,059,304	$0	46 / 2
20 / 100	WWTP ENR Upgrade (Princess Anne WWTP) / CW0063	The plant currently meets only BNR treatment standards.	Install a membrane bioreactor to reach ENR standards per the NPDES discharge permit.	Somerset County Sanitary District, Inc.	Somerset	S	8,522	2028-01-01	Y	Y	Y	N	Y	$19,200,000	$19,200,000	38A / 1
21 / 95	Town of Perryville Wastewater Treatment Plant ENR Refinements Phase 2 / CW0011	The WWTP inconsistently meets ENR/permit limits during seasonal and daily peak flows.	Complete the ENR upgrade by building an influent flow-equalization tank with control improvements.	Town of Perryville	Cecil	S	6,838	2026-07-01	Y	N	Y	N	Y	$7,297,366	$7,297,366	35B / 1
22 / 95	Parkway WRRF Facility and Electrical Upgrades / CW0019	1970s-era equipment has aged out, is flood-prone, and is obsolete and inefficient.	Replace obsolete equipment and upgrade backup power to improve nitrogen removal, meet permits, and cut energy use.	Washington Suburban Sanitary Commission	Prince George's	L	63,751	2026-12-01	Y	N	N	N	Y	$68,911,920	$68,911,920	Multiple / 4
23 / 90	Ellicott City Flood Mitigation Pond T-1 / CW0014	Sediment and nutrient runoff degrade Patapsco water quality and cause frequent flooding.	Build a vegetated flood-detention facility to control stormwater flow.	Howard County, Maryland	Howard	L	0	2027-07-01	Y	N	N	N	Y	$50,000,000	$50,000,000	09B / 3
24 / 90	Middle Branch Resiliency Initiative / CW0030	The Middle Branch suffers degraded water quality, habitat loss, shoreline erosion, and flood risk.	Implement six water-quality/resiliency projects covering 134 drainage acres and 5,275 LF of shoreline restoration.	Mayor and City Council of Baltimore	Baltimore City	L	0	2026-12-01	Y	N	Y	N	Y	$111,028,402	$189,984,189	46 / 7
25 / 90	Fort Washington Stormwater Management and Flood Risk Reduction / CW0076	Stormwater management and flood mitigation are needed to protect Swan Creek and the Upper Potomac and meet MS4 permits.	Treat runoff from 900+ acres via stream restoration and outfall stabilization for major pollutant reductions.	Prince George's County, Maryland	Prince George's	L	0	2027-06-01	N	N	N	N	Y	$19,015,636	$19,015,636	26 / 4
26 / 90	MEBA Wastewater Treatment Plant Elimination and Connection to Region II Wastewater System - ENR / CW0018	The MEBA WWTP discharges high nitrogen, and an ENR upgrade to it would be prohibitively expensive.	Build a pump station to connect MEBA to a regional ENR plant and decommission the MEBA WWTP.	Talbot County, Maryland	Talbot	S	76	2028-12-01	Y	N	N	N	Y	$900,000	$1,530,000	37B / 1
27 / 85	Ellicott City Maryland Avenue Culverts / CW0071	2016 and 2018 floods showed inadequate Tiber Branch conveyance under the CSX railroad, causing loss of life and property.	Expand flow-conveyance capacity under the railroad to reduce the impact of large floods.	Howard County, Maryland	Howard	TBD	0	2027-01-01	Y	N	TBD	N	Y	$35,000,000	$35,000,000	09B / 3
28 / 85	Sewer Pipeline Reconstruction (Sewer Reconstruction and Trunk Sewer Programs) / CW0040	A 2005 consent decree requires major sewer rehab to minimize and eliminate sewage overflows.	Reconstruct 53 miles of sewer—reducing I&I, lining/replacing segments, and rebuilding 1,186 manholes.	Washington Suburban Sanitary Commission	WSSC	L	1,411,532	2026-10-01	Y	Y	N	N	Y	$96,435,016	$96,435,016	Multiple / Multiple
29 / 80	Chestnut Hill Sanitary Sewer Connection / CW0007	Failing septic systems and poor geographic conditions have caused nitrate contamination of the community's drinking water.	Connect Chestnut Hill to the county sewer system, installing grinder pumps, service lines, and flushing connections.	Anne Arundel County, Maryland	Anne Arundel	S	82	2028-04-01	Y	N	N	N	Y	$4,828,000	$4,828,000	30B / 5
30 / 80	Millington Wastewater Treatment Plant Construction & Relocation / CW0031	The 60+ year-old WWTP is flood-prone, causing costly repairs and environmental concerns.	Build a new 0.35 MGD ENR WWTP outside the floodplain with a full treatment train (SBR, filtration, UV, and more).	County Commissioners of Kent County	Kent	L	5,332	2026-11-26	Y	N	Y	N	Y	$6,294,195	$13,699,195	36 / 1
31 / 75	Wastewater Treatment Plant Replacement for the Preserve at Wye Mills / CW0033	The WWTP has chronic compliance deficiencies and excess nitrogen discharge under a 2022 consent decree.	Replace it with a new ENR facility to cut nitrogen and restore compliance.	Talbot County, Maryland	Talbot	S	168	2026-02-01	Y	Y	N	N	Y	$497,260	$2,236,534	37B / 1
32 / 75	Dorchester County Woolford Pump Station Repairs/Replacements / CW0058	Hydrogen-sulfide corrosion, concrete spalling, standing water, and failed pump VFDs leave the station noncompliant with NFPA 820/MDE.	Repair the wetwell, replace corroded pipes and electrical, grout the valve vault, and reduce H2S generation.	Dorchester County	Dorchester	S	336	2027-11-01	Y	Y	Y	N	Y	$843,300	$843,300	37B / 1
33 / 75	Western Branch WRRF Process Train Improvements / CW0053	Deteriorating concrete and equipment need rehab, with multiple TN, TP, and E. coli permit exceedances.	Replace electrical systems, rehab concrete structures, upgrade clarifiers, and improve the denitrification system.	Washington Suburban Sanitary Commission	Prince George's	L	292,430	2026-12-01	Y	N	N	N	Y	$107,691,176	$107,691,176	Multiple / Multiple
34 / 70	Dorchester County Church Creek Pump Station Repairs/Replacements / CW0009	Standing water, hydrogen-sulfide corrosion, and NFPA 820/ventilation noncompliance affect the station and risk contaminating nearby waters.	Repair the wetwell and piping, replace corroded pipes and electrical enclosures, and improve ventilation and drainage.	Dorchester County	Dorchester	S	98	2027-11-01	Y	Y	Y	N	Y	$912,126	$912,126	37B / 1

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35 / 70	Plumpton Park Zoo Sewer Extension / CW0032	Septic issues cause maximum-contaminant-level violations for nitrate in drinking water.	Connect the Plumpton Park Zoo and 13 nearby properties to the sewer system.	Town of Rising Sun	Cecil	S	272	2027-09-01	Y	N	N	N	Y	$1,926,920	$1,926,920	35B / 1
36 / 70	West Nottingham Academy Sewer Extension / CW0052	Frequent nitrate exceedances in groundwater likely stem from septic failures at West Nottingham Academy.	Extend sewer service to the academy in conjunction with drinking-water service.	Town of Rising Sun	Cecil	S	355	2027-09-01	Y	N	N	N	Y	$4,206,930	$4,206,930	35B / 1
37 / 70	Dorchester County Algonquin Pump Station Repairs/Replacements / CW0055	The station requires confined-space entry, has obsolete/poor components, and is noncompliant with NFPA 820/MDE, with a history of overflows.	Build a new wetwell, package suction-lift station, emergency storage, and generator, converting the old wetwell to a bypass vault.	Dorchester County	Dorchester	S	429	2027-11-01	Y	Y	Y	N	Y	$1,098,996	$1,098,996	37B / 1
38 / 70	The Highlands Pressure Sewer / CW0078	Failure rates of 229 residential septic systems are rising; the project depends on forming a special taxing district.	Install ~17,000 LF of pressure sewer and 229 grinder pumps to connect 229 homes to the Chesapeake Beach WWTP.	Board of County Commissioners of Calvert County	Calvert	L	572	2027-05-01	Y	N	N	N	Y	$16,400,000	$16,713,873	27C / 5
39 / 70	Fruitland WWTP Headworks & SBR Upgrade / CW0075	Persistent pump, aeration, corrosion, and equipment failures cause overflows and operator safety hazards at the plant.	Build new headworks, rehab BNR and SBR equipment, add EQ tanks, and upgrade filters and UV disinfection.	City of Fruitland, MD	Wicomico	S	7,144	2027-12-01	Y	Y	Y	N	Y	$14,799,815	$14,799,815	38B / 1
40 / 65	Dorchester County Pinks Pond Pump Station Repairs/Replacements / CW0010	Confined-space safety hazards and obsolete, deteriorated equipment plague the station.	Build a new suction-lift pump station and wetwell, add emergency storage and a backup generator, and repurpose the old wetwell for bypass pumping.	Dorchester County	Dorchester	S	71	2027-11-01	Y	Y	Y	N	Y	$1,053,522	$1,053,522	37B / 1
41 / 65	Evitts Creek CSO Upgrades Phase III - Gravity Sewer through CSX Rail Yard (Project No. 05-08-S/17-03-S1) / CW0072	Aging, deteriorating sewer lines under the CSX railyard connect the pump stations to the Cumberland WWTP.	Replace 2,766 LF of 8–30 inch sewer lines.	Mayor and City Council of Cumebrland	Allegany	L	13,200	2027-10-01	Y	Y	Y	N	Y	$8,513,690	$8,553,640	06 / 1
42 / 65	78" Parallel Pipeline from Mill Race to CSO Storage (Project No. 19-16-S) / CW0065	Mill Race overflows are entering the Potomac River.	Install 14,000 LF of 78-inch pipeline along the C&O Canal to carry flows to the WWTP.	Mayor and City Council of Cumebrland	Allegany	L	39,490	2029-08-01	Y	Y	Y	N	Y	$263,082	$71,286,575	06 / 1
43 / 60	Midland/Gilmore Dam Repair/Stream Restoration / CW0069	MDE rates the dam "High Hazard" and "Unsafe," with downstream erosion, embankment vegetation, and missing gauges.	Repair the dam—removing vegetation, installing inspection gauges, running hydrologic analysis, and fixing abutment erosion.	Town of Lonaconing	Allegany	S	0	2027-02-27	Y	Y	Y	N	Y	$798,152	$798,152	01A / 6
44 / 60	Crownsville Hospital Memorial Park Pumping Station and Force Main / CW0002	The aging Crownsville WWTP is costly, inefficient, and has minimal nutrient-removal capacity.	Build a pump station and force main to route sewage to the Annapolis WRF for ENR treatment.	Anne Arundel County, Maryland	Anne Arundel	S	1,375	2026-08-26	Y	N	N	N	Y	$11,150,000	$11,150,000	33B / 3
45 / 60	New Windsor WWTP ENR Upgrade / CW0068	The WWTP, last updated in 2012, needs component replacement and added tanks to reach ENR treatment.	Upgrade and expand the plant with new headworks, SBR reactors, denitrification filters, UV disinfection, and SCADA controls.	Town of New Windsor	Carroll	S	1,920	2027-12-01	Y	N	N	N	Y	$14,845,000	$14,890,566	05 / 8
46 / 55	Bengies Bourque and Gladway LPS / CW0070	Failing residential septic systems face hydraulic capacity limits, poor soils, and inadequate repair area.	Build a low-pressure sewer system (~3,900 LF of pipe and pumps) to connect 25 homes to the county's gravity sewer.	Baltimore County	Baltimore (Co)	L	63	2027-02-01	Y	N	N	N	Y	$755,000	$2,502,012	07A / 5
47 / 55	Dorchester County Jenkins Creek Pump Station Repairs/Replacements / CW0057	Corroded suction and discharge piping has compromised the station's integrity and worsened sewer overflows.	Replace ~25 ft of suction and ~75 ft of discharge piping and add a U-tap within the wetwell.	Dorchester County	Dorchester	S	143	2027-11-01	Y	Y	Y	N	Y	$64,963	$6,496,269	37B / 1
48 / 50	Deep Creek SP - Wastewater Pump Station and Collection System Upgrade / CW0051	The aging WWTP and collection system suffer high I&I that overwhelms daily pumping capacity.	Replace the pump station and repair/replace 8,000 LF of collection lines.	Department of Natural Resources	Garrett	S	1,722	2029-04-01	Y	N	Y	N	Y	$8,800,000	$8,800,000	01A / 6
49 / 50	Town of Hancock Wastewater System Project - Collection System Rehabilitation / CW0049	The aging sewer system of terra-cotta lines and brick manholes suffers 30% I&I during rain events.	Repair or replace damaged pipes and replace the brick manholes and clay lines.	Town of Hancock	Washington	S	2,120	2028-04-01	Y	Y	Y	N	Y	$3,000,000	$8,010,000	01C / 6
50 / 50	Region V (Tilghman) Wastewater Treatment Plant Upgrade to ENR / CW0038	The WWTP consistently fails to meet ENR limits, discharging excess nutrients into the Chesapeake Bay.	Build a new ENR/membrane-bioreactor facility and decommission the lagoon-based WWTP.	Talbot County, Maryland	Talbot	S	2,230	2028-06-01	Y	N	N	Y	Y	$20,000,000	$20,000,000	37B / 1
51 / 50	Stream Restoration at Thurmont WWTP / CW0024	River erosion threatens the WWTP's banks, and an upstream dam removal will further change conditions.	Design and build 430 ft of river restoration with wetlands, floodplain reconnection, and stream-bank regrading.	Town of Thurmont	Frederick	S	7,865	2027-12-01	Y	N	N	N	Y	$659,000	$659,000	02A / 6

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52 / 50	SC-969 Improvements to Horner's Lane Siphon Across Armistead Run / CW0005	An aged concrete sewer siphon is cracked, leaking, and unsupported, with stream erosion exposing the pipes.	Clean and CIPP-line ~2,400 LF of sewer siphon, rehab two siphon chambers, and restore ~600 LF of stream.	Mayor and City Council of Baltimore	Baltimore City	L	80,000	2026-11-01	Y	N	Y	N	Y	$3,791,485	$10,420,050	45 / 3
53 / 50	SC-969 Improvements to Horner's Lane Siphon Across Armistead Run / CW0102	An aged concrete sewer siphon is cracked, leaking, and unsupported, with stream erosion exposing the pipes.	Clean and CIPP-line ~2,400 LF of sewer siphon, rehab two siphon chambers, and restore ~600 LF of stream.	Baltimore County	Baltimore City	L	80,000	2026-11-01	Y	N	Y	N	Y	$4,087,966	$0	45 / 3
54 / 50	SC-866 Replacement of the Southwest Diversion Pressure Sewer - Phase I / CW0091	The aging sewer suffers overflows, capacity problems, and gravity-section failures, and is hard to maintain through the CSX railyard.	Build 5,500 LF of new 102-inch pipe (mostly open-cut) plus 400 LF of 96-inch pipe and relocate utilities.	Mayor and City Council of Baltimore	Baltimore City	L	111,695	2027-04-30	Y	N	Y	N	Y	$2,342,586	$79,413,288	32 / 7
55 / 50	SC-866 Replacement of the Southwest Diversion Pressure Sewer - Phase I / CW0101	The aging sewer suffers overflows, capacity problems, and gravity-section failures, and is hard to maintain through the CSX railyard.	Build 5,500 LF of new 102-inch pipe (mostly open-cut) plus 400 LF of 96-inch pipe and relocate utilities.	Baltimore County	Baltimore City	L	111,695	2027-04-30	Y	N	N	N	Y	$44,471,441	$0	32 / 7
56 / 50	SC-985 Rehabilitation of the High Level Interceptor, Phase I / CW0092	Multiple sinkholes from failed cast-in-place concrete pipe require costly emergency repairs at busy intersections.	Rehabilitate 16,815 LF of 33–66 inch interceptor sewer, including a Jones Falls siphon, via open-cut and CIPP lining.	Mayor and City Council of Baltimore	Baltimore City	L	222,360	2026-05-01	Y	N	Y	N	Y	$7,982,305	$38,530,764	Multiple / 7
57 / 50	Little Patuxent Water Reclamation Plant Flow Equalization Improvements / CW0028	Three aging equalization basins are under capacity, risking noncompliance during high wet-weather flows.	Replace them with four larger basins to meet future daily and wet-weather equalization needs.	Howard County, Maryland	Howard	L	224,135	2027-12-01	Y	N	N	N	Y	$37,300,000	$37,300,000	13 / 3
58 / 45	Dorchester County Jacktown Pump Station Repairs/Replacements / CW0056	Hazardous conditions, an insufficient bypass, and an obsolete transfer switch leave the station noncompliant with NFPA 820/MDE.	Evaluate and upgrade the station—repairing the wetwell, influent manhole, bypass, ladder, and transfer switch.	Dorchester County	Dorchester	S	289	2027-11-01	Y	N	Y	N	N	$139,747	$139,747	37B / 1
59 / 45	Creamery Road Pump Station Replacement / CW0050	The pump station is past its life, lacks a working bypass and telemetry, and has unsafe ventilation.	Replace pumps, controls, electrical gear, and generator; fix the bypass; and add flood protection.	Town of East New Market	Dorchester	S	450	2027-10-01	Y	N	Y	N	Y	$1,729,000	$1,749,000	37A / 1
60 / 45	Johnson Street South CSO Removal / CW0013	Combined sewer overflows are discharging into the Potomac River.	Replace ~18,400 LF of storm and sanitary sewer main and install new outfall/inflow structures, laterals, and manholes.	Town of Westernport	Allegany	S	2,500	2028-02-01	Y	Y	Y	N	Y	$9,518,150	$9,518,150	01A / 6
61 / 43	Cambridge Creek Interceptor Sewer Rehabilitation / CW0073	Root intrusion causes joint failures, groundwater intrusion, exceeded capacity, and sewer overflows.	Slip-line 6,000 LF of clay pipe with new jointless pipe inside the old pipe.	Commissioners of Cambridge	Dorchester	L	5,200	2027-08-01	Y	N	Y	N	Y	$3,654,300	$3,659,300	Multiple / 1
62 / 40	Largo Town Center Pond Enhancement & Dam Mitigation / CW0017	MDE rates the Largo dam a significant hazard; repairs are needed to prevent flooding and protect Western Branch water quality.	Planning and design to stabilize the embankment, assess dredging, and add sediment forebays.	Prince George's County, Maryland	Prince George's	L	0	N/A	Y	N	N	N	Y	$750,000	$750,000	24 / 4
63 / 40	Greenbrier State Park-Wastewater Collection System Upgrade / CW0016	The aging collection system experiences I&I, and flows can nearly double the 50,000 GPD treatment capacity.	Install ~11,300 LF of sewer piping and 45 manholes to serve Greenbrier State Park.	Department of Natural Resources	Washington	S	1,150	2027-10-01	Y	N	Y	N	Y	$7,123,000	$7,123,000	02A / 6
64 / 40	Braddock Run Sewer Interceptor at LaVale Plaza / CW0048	A 2025 flood damaged and exposed the Braddock Run sewer interceptor.	Install 1,000 LF of 18-inch interceptor and abandon the flood-exposed line.	LaVale Sanitary Commission	Allegany	S	5,510	2027-01-01	Y	Y	Y	N	Y	$850,000	$1,000,000	01B / 6
65 / 40	Hagerstown Wastewater Treatment Plant Improvements Phase 2A / CW0001	Malfunctioning clarifiers and scum system fail to remove phosphorus and nitrogen.	Upgrade the plant by replacing the clarifiers, generator, grit system, pumps, and electrical equipment.	Town of Hagerstown	Washington	L	50,200	2028-04-01	Y	N	Y	N	Y	$27,500,000	$31,625,000	02B / 6
66 / 40	Hagerstown Wastewater Treatment Plant Improvements Phase 2B / CW0077	A malfunctioning scum conveyance system prevents the plant from meeting TP effluent limits.	Upgrade the biosolids tank, automate clarifier scum removal, and improve the biosolids processing facility.	Town of Hagerstown	Washington	L	50,200	2028-04-01	Y	N	Y	N	Y	$11,000,000	$12,650,000	02B / 6
67 / 35	Annapolis City Dock Redevelopment: Resilience and Recovery / CW0066	Annapolis's City Dock area increasingly floods, disrupting downtown commerce and traffic.	Build flood-proofing and stormwater projects—rain gardens, tree plantings, surge barriers, and new storm drains.	City of Annapolis	Anne Arundel	S	0	2027-07-01	Y	N	N	N	Y	$5,000,000	$11,100,000	30A / 3
68 / 35	Oakland Sewer Lines Rehabilitation / CW0012	Sewer lines and manholes are aging.	Repair or replace sewer lines, manholes, and laterals.	Town of Oakland	Garrett	S	1,849	2027-04-27	Y	N	N	N	Y	$2,500,000	$2,500,000	01A / 1
69 / 35	Pittsville WWTP Upgrade & Septic Elimination Project / CW0080	Nonfunctional headworks, a failing oxidation ditch, and hydraulic struggles keep the plant out of NPDES compliance with no redundancy.	Build a new ENR SBR plant and eliminate septic systems via a gravity/grinder-pump collection system.	Town of Pittsville	Wicomico	S	2,319	2028-01-01	Y	N	N	N	Y	$37,988,000	$38,047,949	38C / 1

Maryland Water Infrastructure Financing Administration
FY 2026 Clean Water Project Priority List

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Rank / Points	Project Title / Project No.	Problem	Project Description	Applicant	County	Size	Ben. Pop.	Constr. Date	Public?(Y/N)	Compliance?	Disadv.?	PFAS/EC?	Loan Int.?	Funding Request	Total Project Cost	Leg. Dist / Congr. Dist
70 / 35	Town of Smithsburg Wastewater Pump Station Replacement / CW0046	The 50+ year-old pump stations and sewers, including clay lines, cause significant I&I and overflows.	Replace 2,500 LF of cast-iron mains, build three package pump stations, and demolish three existing ones.	Town of Smithsburg	Washington	S	3,250	2026-02-01	Y	N	N	N	Y	$3,202,600	$3,815,000	02A / 6
71 / 35	Region II - St. Michaels Wastewater Treatment Plant - ENR Process Refinements / CW0036	Aging equipment nearing the end of its useful life threatens reliability and high maintenance costs.	Conduct a study to evaluate critical treatment components and identify rehabilitation needs.	Talbot County, Maryland	Talbot	S	6,850	2028-06-01	Y	N	Y	N	Y	$150,000	$150,000	37B / 1
72 / 30	Riverview Mobile Home Park Wastewater Treatment Plant Project / CW0022	A limited, impaired septic system adds nitrogen and phosphorus to the phosphorus-impaired Bishopville Prong watershed.	Replace it with a 30,000 GPD ENR membrane-bioreactor WWTP and new outfall, plus riparian forest planting.	Riverview Park, LLC	Worcester	S	126	2026-10-01	N	Y	Y	N	Y	$2,401,500	$2,789,000	38C / 1
73 / 30	City of Rockville Disadvantaged Community (DAC) Wastewater Collection System Rehabilitation / CW0067	Aging infrastructure in a disadvantaged Rockville community causes sewer overflows, basement backups, and I&I.	Carry out targeted renovations, proactive maintenance, and infiltration-reduction measures.	City of Rockville	Montgomery	L	1,095	2027-12-01	Y	N	N	N	Y	$443,000	$443,000	17 / 8
74 / 30	Hurlock WWTP Study / CW0079	The aging WWTP and its spray-irrigation/lagoon system are out of compliance and operating poorly.	Study the plant to keep it compliant and propose upgrades to sustain function for another 20 years.	Mayor and Council of Hurlock	Dorchester	S	2,205	N/A	Y	Y	Y	N	Y	$95,000	$95,000	37A / 1
75 / 30	Rising Sun WWTP Sludge Management Sustainability and Resiliency / CW0023	Severe storms and flooding have damaged the sludge-storage lagoon, causing embankment overtopping and structural damage.	Decommission the lagoon in favor of a sludge holding tank and belt filter press, with stream or wetland restoration.	Town of Rising Sun	Cecil	S	3,275	2027-09-01	Y	N	N	N	Y	$7,556,850	$7,556,850	35B / 1
76 / 30	Delmar Sewer Replacement Project - Phase 2 / CW0054	Old clay sewer mains and manholes leak, with I&I estimated at 36% of WWTP inflow.	Rehab or replace ~6,160 LF of the worst-condition clay pipe using in-place lining methods.	Town of Delmar	Wicomico	S	6,588	2027-05-01	Y	Y	Y	N	Y	$3,220,608	$3,244,569	38B / 1
77 / 30	Town of Thurmont Equalization Tank / CW0064	An equalization tank is needed to improve efficiency and handle more frequent large storms and I&I.	Install a 1.0 MGD equalization tank to stabilize pollutant load and WWTP demand.	Town of Thurmont	Frederick	S	7,865	2028-01-01	Y	N	N	N	Y	$3,458,000	$3,458,000	02A / 6
78 / 30	Easton Utilities I&I Mitigation Program / CW0059	The aging sewer collection system suffers I&I and pipe/manhole damage, risking release of untreated wastewater.	Run a 10-year program to clean, inspect, construct, and repair the collection system.	Easton Utilities	Talbot	L	21,000	2027-09-01	Y	N	N	N	Y	$13,860,000	$13,980,000	37B / 1
79 / 30	Easton Utilities Windmill Interceptor Rehab / CW0061	The Windmill Interceptor suffers I&I from cracked pipes, leaking manholes, and extensive root intrusion.	Design and build new sewer mains and manholes in the floodplain to eliminate I&I and add resilience.	Easton Utilities	Talbot	L	21,000	2027-03-01	Y	N	N	N	Y	$1,881,160	$1,936,490	37B / 1
80 / 20	Jones Creek Force Main Replacement / CW0088	An exposed ductile-iron force main near Jones Creek and Route 13 poses maintenance, environmental, and safety hazards, with a failure history.	Design and build a replacement sewer force main.	Somerset County Sanitary District, Inc.	Somerset	S	187	2027-08-01	Y	N	Y	N	Y	$272,830	$282,830	38A / 1
81 / 20	Tasker Lane Shoreline Stabilization Project / CW0044	A 10-inch sewer discharge pipe needs corrective action to protect its integrity and the NE River.	Stabilize the pipe with a boulder/rock sill, sand backfill, and 1,100 SF of ground-cover planting.	Town of Charlestown	Cecil	S	200	N/A	Y	N	N	N	N	$200,000	$200,000	35A / 1
82 / 20	Chestnut Ridge & Jennings Phase 1 Sewer Collection System Improvements / CW0015	An aging pump station and sewer system suffer corrosion and inflow/infiltration.	Replace the pump station and complete an I&I study.	Garrett County Sanitary District, Inc	Garrett	S	226	2027-10-27	Y	N	Y	N	Y	$5,820,000	$5,842,750	01A / 6
83 / 20	SC-1030R - On-Call Rehabilitation, Repairs, Improvements, and Condition Assessment of Sanitary Sewer Laterals - Various Locations / CW0085	Citywide inflow and infiltration affects the sanitary sewer system.	Rehabilitate ~15,000 LF of sewer mains and laterals.	Mayor and City Council of Baltimore	Baltimore City	L	1,000	2026-12-01	Y	N	Y	N	Y	$8,748,000	$9,820,000	Multiple / Multiple
84 / 20	Crownsville Hospital Memorial Park Wastewater Treatment Plant Decommissioning / CW0081	The Crownsville Hospital WWTP is past its useful life, costly to maintain, and has low treatment capability.	Decommission the old WWTP and connect its flow to the higher-capacity Annapolis WRF.	Anne Arundel County, Maryland	Anne Arundel	S	1,375	2027-01-01	Y	N	N	N	Y	$4,240,000	$4,240,000	33B / 3
85 / 20	Region V (Tilghman) Sewer Collection System Improvements to Support New ENR WWTP Upgrade / CW0037	The aging Tilghman Island sewer system experiences wet-weather I&I.	Plan, design, and rehabilitate gravity sewers and manholes, add road improvements, and implement I&I monitoring.	Talbot County, Maryland	Talbot	S	1,630	2028-06-01	Y	N	N	N	Y	$6,000,000	$6,000,000	37B / 1
86 / 20	Sludge Management Improvements / CW0041	High water content and an inefficient drying process make sludge disposal costly.	Add a low-temperature evaporative dryer to reach 90% dry solids and cut disposal costs.	Town of Delmar	Wicomico	S	6,588	2027-06-01	Y	N	Y	N	Y	$1,993,000	$1,993,000	38B / 1

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87 / 20	Septage Receiving Station / CW0039	The septage receiving system is past its useful life and lets unscreened septage discharge into the receiving stream.	Replace it with a new, more efficient septage receiving system.	Somerset County Sanitary District, Inc.	Somerset	S	8,522	2027-06-01	Y	N	Y	N	Y	$625,000	$645,000	38A / 1
88 / 20	Somerset County Sanitary District I&I Improvements / CW0087	The gravity collection system on Crisfield Lane is deteriorating with inadequate slope, causing blockages and failure risk.	Fix I&I by pipe-bursting under Route 13 and lining/replacing nearby gravity sewer segments.	Somerset County Sanitary District, Inc.	Somerset	S	8,522	2027-08-01	Y	N	Y	N	Y	$2,208,800	$2,208,800	38A / 1
89 / 20	Salisbury WWTP Outfall / CW0062	Heavy flows overwhelm the WWTP outfall, causing upstream surcharges and overflows into abandoned filter boxes.	Design and build a new outfall from the Salisbury WWTP to the permitted Wicomico River discharge point.	City of Salisbury	Wicomico	L	60,794	2028-04-01	Y	N	Y	N	Y	$8,942,000	$9,442,000	38B / 1
90 / 20	Edgemont Reservoir Repair and Rehab Project / CW0083	MDE-noted dam deficiencies threaten downstream water quality.	Study toe-drain seepage and repair the toe drain, spillway, intake/drain piping, and structure, removing embankment trees.	Town of Hagerstown	Washington	L	108,600	2027-06-01	Y	Y	Y	N	Y	$30,000,000	$34,100,000	02B / 6
91 / 10	Environmental Restoration Contract 4037 for Outfall Stabilization Design-Build & Maintenance Project / CW0003	Baltimore City's stormwater outfalls are in disrepair and must be rehabilitated to meet the city's MS4 permit.	Use design-build delivery to repair the outfalls (19 in design, 70 more identified).	Mayor and City Council of Baltimore	Baltimore City	L	0	2028-02-01	Y	N	Y	N	Y	$18,000,000	$18,000,000	Multiple / Multiple
92 / 10	Project PEARL / CW0034	Plastic pollution and nutrient runoff degrade waterways, with no targeted treatment approach in place.	Fund the PEARL mobile/modular water-quality treatment unit that deploys where needed and provides real-time data.	Local Seafood Projects	Baltimore City	S	0	2026-05-26	N	N	Y	Y	Y	$1,200,000	$1,200,000	46 / 2
93 / 10	WWTP Lagoon Decommissioning - ENR Upgrade Phase II / CW0027	The WWTP lagoons violate the town's NPDES permit and an MDE consent order.	Properly abandon the town's obsolete WWTP lagoons.	Town of Secretary	Dorchester	S	1,500	2026-09-01	Y	Y	N	N	Y	$3,690,000	$3,690,000	37B / 1
94 / 10	Security Updates for Wastewater Treatment Facilities / CW0094	Several unmanned county-owned wastewater facilities lack security equipment.	Install security cameras at several Washington County wastewater facilities.	Washington County Board of County Commissioners	Washington	S	1,700	2026-03-26	Y	N	N	N	Y	$85,000	$85,000	02A / 6
95 / 10	Hagerstown Pump Station 13 Reconstruction / CW0084	A 2022 agreement requires transferring city flows back from the county wastewater system to the city's.	Reconstruct Pump Station 13, which was decommissioned in 2003.	Town of Hagerstown	Washington	L	50,200	2027-03-01	Y	N	Y	N	Y	$5,175,000	$6,120,000	02B / 6
96 / 10	Southside Pump Station Force Main / CW0042	The force main lacks redundancy, risking costly sewer overflows into the Wicomico River.	Design and build a redundant force main from the Southside Pump Station to the Salisbury WWTP.	City of Salisbury	Wicomico	L	60,794	2028-03-01	Y	N	Y	N	Y	$5,980,000	$6,814,275	38B / 1
97 / 1	Region II - Unionville, Tunis Mills and Copperville Pump Station Improvements (WITHDRAWN) / CW0021	Not provided — project application withdrawn.	Project application withdrawn.	Talbot County, Maryland	Talbot	S	600	2028-06-01	Y	N	Y	N	Y	$3,000,000	$3,000,000	37B / 1
98 / 1	Region II - Martingham Sewer Replacement - Section 3 (WITHDRAWN) / CW0029	Not provided — project application withdrawn.	Project application withdrawn.	Talbot County, Maryland	Talbot	S	850	2028-12-01	Y	N	Y	N	Y	$2,420,000	$2,420,000	37B / 1
99 / 1	Region II - Royal Oak, Newcomb and Bellevue Pump Station Improvements (WITHDRAWN) / CW0035	Not provided — project application withdrawn.	Project application withdrawn.	Talbot County, Maryland	Talbot	S	1,300	2028-06-01	Y	N	Y	N	Y	$3,000,000	$3,000,000	37B / 1
100 / 0	West Street Reconstruction Phase 2 / CW0026	Aging sewer infrastructure suffers infiltration and risks groundwater contamination.	Replace ~2,120 LF of gravity sewer and associated laterals along West Street in Berlin.	Town of Berlin	Worcester	S	350	2027-04-01	Y	N	Y	N	Y	$1,232,910	$1,242,210	38A / 1
101 / 0	Flower Street Pump Station Relocation / CW0074	The pump station's age and location pose hazards—road failure, low reliability, and personnel injury are imminent.	Replace it with a new wetwell, efficient pumps, SCADA, and generator, plus ~250 LF of sewer and manholes.	Town of Berlin	Worcester	S	5,590	2027-09-01	Y	N	Y	N	Y	$1,428,200	$1,438,900	38A / 1
102 / 0	Delmar Pump Station Improvements / CW0008	Pump-station drives lack redundancy in monitoring and control, raising the risk of sewer overflows.	Upgrade the pump stations' electrical controls and ancillary equipment to improve safe operation.	Town of Delmar	Wicomico	S	6,588	2027-06-01	Y	N	Y	N	Y	$437,760	$441,010	38B / 1

Maryland Water Infrastructure Financing Administration: Project List Abbreviation Glossary

FFY 2026/SFY 2028 Clean Water & Drinking Water State Revolving Fund Project Priority Lists (PPLs)

Abbreviation	Definition
AMI	Advanced Metering Infrastructure
Ben. Pop.	Benefitting population (of a certain project)
BNR	Biological Nutrient Removal
CIPP	Cured-In-Place Pipe
DAF	Dissolved Air Flotation
ENR	Enhanced Nutrient Removal
FM	Force Main
GAC	Granular Activated Carbon
GPD	Gallons Per Day
GPM	Gallons Per Minute
GRR	Galvanized Requiring Replacement (service line)
H2S	Hydrogen Sulfide
I&I	Inflow and Infiltration
IX	Ion Exchange
LCRI/LCRR	Lead and Copper Rule Improvements (Revisions)
Leg. Dist/Cong. Dist	(State) Legislative District and Congressional District
LF	Linear Feet
MCL	Maximum Contaminant Level
MGD	Million Gallons per Day

Abbreviation	Definition
MLSS	Mixed Liquor Suspended Solids
MS4	Municipal Separate Storm Sewer System
NFPA	National Fire Protection Association (NFPA 820 Standard)
NPDES	National Pollutant Discharge Elimination System
PFAS	Per- and Polyfluoroalkyl Substances
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonate and Perfluorooctanesulfonic Acid
PRV	Pressure Reducing Valve
PVC	Polyvinyl Chloride
SBR	Sequencing Batch Reactor
SCADA	Supervisory Control and Data Acquisition
SF	Square Feet
SP(S)	Sewage Pump (Station)
TN	Total Nitrogen
TP	Total Phosphorus
UV	Ultraviolet (Disinfection)
VFD / VFDs	Variable Frequency Drive(s)
WRF	Water Reclamation Facility
WRRF	Water Resource Recovery Facility
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

APPENDIX B

CWSRF Integrated Project Priority System (IPPS)

State Fiscal Year 2026
(July 1, 2025 – June 30, 2026)

Approved by U.S. EPA on November 24, 2010
Revision 1 approved by U.S. EPA on November 14, 2012
Revision 2 approved by U.S. EPA on January 22, 2015
Revision 3 approved by U.S. EPA on November 10, 2016
Revision 4 approved by U.S. EPA on January 31, 2020
Revision 5 approved by U.S. EPA on January 8, 2021
Revision 6 approved by U.S. EPA on January 11, 2023
Revision 6 Amendment 1 approved by U.S. EPA on February 6, 2023
Revision 6 Amendment 2 approved by U.S. EPA on October 17, 2024

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 Infrastructure Financing Administration (MWIFA), formerly Maryland Water Quality Financing Administration, 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) (including funds that are authorized to flow through the WQSRF, such as the Bipartisan Infrastructure Law of November 2021)
- Bay Restoration Fund (BRF) Wastewater Grant
- Supplemental Assistance Grant
- Sewer Overflow and Stormwater Reuse Municipal Grants Program (OSG)

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 MWIFA web page.

Threshold Requirements for MDE Funding of Treatment Works Projects[1]

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 septics 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

MWIFA 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:

- Projects that treat, restore, create, or rehabilitate acreage (i.e., stormwater, wetland, upland forest, and riparian buffer) will be ranked by acreage improved, largest to smallest.

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

- Stream restoration and shoreline erosion control projects will be ranked by the number of linear feet, largest to smallest.
- 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 (You may also assume this reduction if the project involves sludge handling system upgrade or improvement at an ENR facility.)
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 = 5.55 lb/yr * number of existing Equivalent Dwelling Units (EDUs)[2] to be connected
Sewer extension to connect existing structures on septic to BNR WWTP	Lbs/yr TN Reduction = 9.98 lb/yr * number of existing EDUs[2] to be connected
Sewer extension to connect existing structures on septic to ENR WWTP	Lbs/yr TN Reduction = 12.2 lb/yr * number of existing EDUs[2] 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 "Urban Stormwater Management Credit Calculator" posted under the "Associated Documents" heading here to calculate Edge of Stream (EOS) reductions.
Stream restoration	Length of stream to be restored in linear feet (as measured down center of stream) * 0.075
Shoreline erosion control (e.g., living shoreline)	Length of shoreline restored in linear feet * 0.086

[2] 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).

<table>
<tr><td>Upland forest planting</td><td>Acreage of non-riparian zone to be permanently restored with Maryland native tree and plant species * the appropriate multiplier from the list below:
- Crop to Forest = 32.62
- Pasture to Forest = 21.31
- Hay to Forest = 18.83
- Turf to Forest = 11.12
- Mixed Open to Forest = 5.88</td></tr>
<tr><td>Riparian buffer restoration</td><td>Acreage of riparian zone (i.e., within 100 feet from stream edge) 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</td></tr>
<tr><td>Wetland Restoration[3]</td><td>Acreage of wetland restored * the appropriate multiplier from the table below:
TN Reduction (lbs/ac/yr)<table><tr><th>Category</th><th>Physiographic Subregion</th><th>Other Wetlands</th><th>Floodplain Wetlands</th></tr><tr><td>1</td><td>Appalachian Plateau, Ridge and Valley, Outer Coastal Plain – Poorly Drained</td><td>12.31</td><td>24.63</td></tr><tr><td>2</td><td>Blue Ridge, Piedmont, Outer Coastal Plain – Well Drained, Coastal Plain Lowlands, Karst Terrain</td><td>24.63</td><td>36.94</td></tr><tr><td>3</td><td>Inner Coastal Plain</td><td>49.26</td><td>73.89</td></tr></table>Please see the MD geomorphic map here to estimate which category applies to the project</td></tr>
<tr><td>Wetland Creation[3,4]</td><td>Acreage of wetland creation * (reported drainage area * 8.80 lbs/upland ac/yr). Otherwise, acreage of wetland creation * the appropriate multiplier from the table below:
TN Reduction (lbs/ac/yr)<table><tr><th>Other Wetlands</th><th>Floodplain Wetlands</th></tr><tr><td>8.80</td><td>13.19</td></tr></table></td></tr>
<tr><td>Wetland Rehabilitation[3,4]</td><td>Acreage of wetland rehabilitation* (reported drainage area * 4.69 lbs/upland ac/yr). Otherwise, acreage of wetland rehabilitation * the appropriate multiplier from the table below:
TN Reduction (lbs/ac/yr)<table><tr><th>Other Wetlands</th><th>Floodplain Wetlands</th></tr><tr><td>4.69</td><td>7.04</td></tr></table></td></tr>
</table>

Twenty-five (25) points will be awarded to projects resulting in a “high” TN reduction (greater than 2,000 lbs/year).

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).

[3] Please note that wetland projects can only be applied to agricultural land use.
[4] Drainage area should be limited to 6 upland acres per acre created/rehabilitated for Floodplain; 4 upland acres per acre created/rehabilitated for Other/Headwater.

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).

The table below outlines approximate equivalency examples for "high" and "medium" TN reductions for reference:

TN Reduction	RR[5] 1in	ST[6]1in	WWTP → ENR	Septic → ENR	Riparian Buffer Restoration	Floodplain Wetland Creation
High	250 Impervious ac	155 Impervious ac	45,000 gpd	164 connections	56-220 ac	152 ac
Medium	130 Impervious ac	75 Impervious ac	22,000 gpd	82 connections	28-110 ac	114 ac

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

[5] Runoff Reduction
[6] Stormwater Treatment

- 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); or

- Harmful Algal Blooms (HABs) above the EPA recommended Microcystin WQ criteria of 8 ug/l; or

- Human exposure to perfluoroalkyl and polyfluoroalkyl substances (PFAS) and other emerging contaminants in the environment (other than drinking water) via an eligible use under section 603(c) of the Federal Water Pollution Control Act

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).

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).

Fifteen (15) points will be awarded to a project that mitigates fecal bacteria pollution within a watershed containing a shellfish harvesting area that has been closed in the past 3 years, as confirmed by documentation submitted by the applicant and MDE's fish and shellfish advisory programs.

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 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.

Twenty (20) 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).

Ten (10) points will be awarded to projects with a "high" annualized capital cost $/lb. per year (greater than $100/lb TN per year but less than or equal to $150/lb. TN per year).

Projects with a "very high" annualized capital cost $/lb TN per year (greater than $150/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 septics 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 Appendix D II of the 2021 State Hazard Mitigation Plan. Due to the large file size of the document, the pertinent risk maps have been extracted and are posted here.

- 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 for which at least 50 percent of the project cost or project scope must serve, protect, or benefit an Environmental Justice or overburdened community as identified by a Socioeconomic Score (Distribution Across Maryland) of 75 or more using MDE's Environmental Justice Tracking Tool.

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/MEMA) is confirmed in writing as committed funding or pending.

Public Participation

A 30-day public comment period for draft Revision 6 IPPS began on November 21, 2022 and ended at midnight on December 20, 2022. Draft Revision 6 was emailed to MWIFA's contact list at the start of the comment period and posted for the full 30 days on MWIFA's website.

Comments and questions on Draft Revision 6 IPPS were accepted via e-mail to mde.wqfa_announcement@maryland.gov. All comments received 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.

An additional change to Section IV – Nitrogen Removal Cost Efficiency which increased points for projects with a "medium" annualized capital cost $/lb., added an additional category for projects with a "high" annualized capital cost $/lb., and changed the definition of the highest category for projects with a "very high" annualized capital cost $/lb. from $100/lb to $150/lb to conform with a change in MDE policy in funding minor wastewater treatment plants and benefits submitting applicants, was submitted to and approved by EPA on February 6, 2023 without further public comment. The change was published on MWIFA's webpage on MDE's website.

APPENDIX C

Public Comment Responsiveness Summary

State Fiscal Year 2026
(July 1, 2025 – June 30, 2026)

Responsiveness Summary for the
Federal Fiscal Year 2026 / State Fiscal Year 2028 Draft Documents:
Water Quality and Drinking Water State Revolving Funds

This document provides details regarding comments received and actions taken by the Maryland Water Infrastructure Financing Administration (MWIFA) in response to those comments, and any other changes/corrections made by MWIFA to the following draft documents that were available for a public comment period, in accordance with the requirements of the Federal Clean Water Act and the Safe Drinking Water Act:

Draft FFY 2026/State FY 2028 Water Quality Project Priority List (PPL)
Draft FFY 2026/State FY 2028 Drinking Water PPL

Draft FFY 2026 Water Quality Revolving Loan Fund Intended Use Plan (IUP) Document
Draft FFY 2026 Drinking Water Revolving Loan Fund IUP Document

Draft FFY 2026 Water Quality Revolving Loan Fund IUP Table 1
Draft FFY 2026 Drinking Water Revolving Loan Fund IUP Table 1

Each IUP document contains details regarding the respective public comment periods. The original comment period opened on July 23, 2026 and was set to close on August 21, 2026. However, on August 7, 2026, the Water Quality and Drinking Water PPLs were updated with more detailed project descriptions and re-posted on the website in response to public requests for more information. The comment period deadline was extended to September 6, 2026, and this extension and the PPL updates were communicated to interested parties via email.

Comments Received & Changes Made

The Department received the following comments during the July 23 to September 6, 2026 comment period. Changes made to the funding documents in response to public comments, if any, are also described underneath the summary of each comment and response. All comments focused on the Water Quality State Revolving Fund draft funding documents; no comments addressed the Drinking Water State Revolving Fund draft funding documents.

1. Mr. Kenneth Bawer of Montgomery County, MD, representing the organization Coalition to Stop Stream Destruction, emailed to inquire for further details on the project "Montgomery County MS4 Permit – Water Quality Improvement Projects" as listed in the IUP Table 1. He added that the project should not receive any funding from MWIFA, stating that projects of this kind are not "green", are not aligned with the Clean Water Act, have no "cost-efficiency" or "sustainability", and possess no "co-benefits" for the surrounding area. Mr. Bawer also attached a longer-form, detailed memorandum elaborating on the Coalition's positions and citing various pieces of scientific literature in support of these positions.

   MWIFA Response: MWIFA thanked Mr. Bawer for his questions and for identifying potential negative impacts of stream restoration projects. In an email response after the closing of the comment period, MWIFA provided further context on the items raised by Mr.

Bawer. MWIFA provided a memorandum prepared by MDE's Water & Science Administration explaining why MDE and many Maryland localities support stream restoration projects such as the Montgomery County example Mr. Bawer cited. The memorandum stated that Department endeavors to employ the latest science and work in conjunction with the U.S. EPA's Chesapeake Bay Program and other Maryland state agencies providing oversight, such as the Department of Natural Resources, when considering such projects. The memorandum also noted that stream restoration projects are a Chesapeake Bay Program-approved restoration practice that helps the State and local jurisdictions meet their Chesapeake Bay Restoration goals by way of stormwater permit compliance and to meet Total Maximum Daily Load goals. The practices proposed for funding are eligible and were evaluated using MWIFA's EPA-approved criteria called "Integrated Project Priority System for Water Quality Capital Projects Point Sources and Nonpoint Sources". The criteria are available on the web here: https://mde.maryland.gov/programs/water/WQFA/Documents/FINAL%20WQ%20IPPS%20Rev%206%20Amend%202.pdf.

Mr. Bawer's response was considered in the decision to update the Water Quality and Drinking Water PPLs to include more detailed descriptions of each project. No change was made to the score or the rank of this project in response to these comments.

A copy of the memorandum prepared by MDE's Water & Science Administration is presented below in the attachments.

2. Ms. Marilyn Williams, an employee of the government of Dorchester County, Maryland, emailed to highlight a typographical error made in the FFY 2026/SFY 2028 Water Quality PPL, as well as to request it be changed. Specifically, the PPL in question indicated that the total project cost for the Dorchester County Jenkins Creek Pump Station Repairs/Replacements project was $6,496,269, while the actual total project cost was $64,963.

   MWIFA Response: MWIFA thanked Ms. Williams for her review and for bringing this issue to its attention. The Water Quality PPL for FFY 2026/SFY 2028 has been corrected to address this issue, and a corrected copy was forwarded to Ms. Williams. This corrected version will also be available on MWIFA's website. No further changes were made to the PPL or other funding documents in response to this comment.

3. Mr. Robert Duma, an engineer employed with Davis, Bowen & Freidel, Inc., emailed on behalf of the Town of Pittsville and Wicomico County, Maryland to request further review of their project, Pittsville [Wastewater Treatment Plant] Upgrade & Septic Elimination. Mr. Duma noted that in the FFY 2026/SFY 2028 Water Quality IUP Table 1, the project had the comment "W/S + PFA issue" in its rightmost column, meaning issues relating to the project's inclusion in the relevant Water & Sewer Plan and a Priority Funding Area make it ineligible for MWIFA funding. Mr. Duma stated that in his view, the project's geographical area, as submitted to MWIFA, is either within the town of Pittsville's PFA, within the Parsonsburg Rural Village PFA, or covered by a PFA exception letter issued by the Maryland Department of Planning, and requested further discussion with MWIFA.

MWIFA Response: MWIFA thanked Mr. Duma for his comments on the FFY 2026/SFY 2028 Water Quality IUP and its Table 1. MDE's Water & Science Administration (WSA) reviewed the materials submitted by Mr. Duma in connection with this project after the solicitation cycle ended in January 2026, including the PFA exception letter issued by the Maryland Department of Planning on 9/10/25. However, MWIFA noted the project's scope includes expansion, and part of the project is not covered by the PFA nor the attached PFA exception letter (i.e., Parcel 0122 as identified in the Wicomico County Water & Sewer Plan), making it ineligible based on MDE's PFA criteria. Furthermore, the project remains inconsistent with the Water & Sewer Plan. The W/S Plan must be amended to include this project. MWIFA and MDE's WSA upholds their determination on the project's issues regarding its PFA and Water & Sewer Plan eligibility. MWIFA noted that Mr. Duma can contact the relevant parties at MDE's WSA for any further questions on this matter.

Changes Made Subsequent to the Public Comment Period (other than any specified above)

1. In response to a review comment from EPA Region 3 that CW SRF funding was incorrectly programmed to a private company named Riverview Park, LLC for the "Riverview Mobile Home Park Wastewater Treatment Plant Project" in Worcester County, this project was removed from the CW SRF Table 1.

Attachments

Attachments to this document include the responses received by email from Kenneth Bawer, Marilyn Williams, and Robert Duma, as well as responses by MWIFA and attachments sent by either party in the respective email exchanges.

*****

Copies of all records pertaining to this public process are available at the offices of MDE, 1800 Washington Blvd., Baltimore, Maryland 21230.

The response was:

452 4.2.2 The recipient's inbox is out of storage space. Please direct the recipient to https://support.google.com/mail/?p=OverQuotaTemp 46e09a7af769-7ee43a7fbfbsor5232343a34.11 - gsmtp

Final-Recipient: rfc822; kidsfarminc@gmail.com
Action: failed
Status: 4.2.2
Diagnostic-Code: smtp; 452-4.2.2 The recipient's inbox is out of storage space. Please direct the
 452-4.2.2 recipient to
 452 4.2.2 https://support.google.com/mail/?p=OverQuotaTemp 46e09a7af769-7ee43a7fbfbsor5232343a34.11 - gsmtp
Last-Attempt-Date: Sun, 26 Jul 2026 08:59:31 -0700 (PDT)

noname
5K

Ken Bawer <kbawer@msn.com> Tue, Jul 28, 2026 at 11:35 AM
To: MDE WQFA_Announcement <mde.wqfa_announcement@maryland.gov>

Hi, Paul.

I see that Montgomery County has a listed project in Table #1 Draft Water Quality IUP Table 1.

However, that project is not shown in Table #2 Draft Water Quality PPL.

Does that mean that although the Mo Co project ranked high enough to be shown in #1, it did not make the final cut in #2 and will therefore not be considered for funding?

Also, the description below for Table #2 says that it includes project details, but it doesn't appear to have any more details than in Table #1. Am I missing something?

Thanks,

Ken Bawer

From: paul.emmart@maryland.gov <paul.emmart@maryland.gov> on behalf of MDE WQFA_Announcement <mde.wqfa_announcement@maryland.gov>
Sent: Thursday, July 23, 2026 8:38 AM
To: MDE WQFA_Announcement <mde.wqfa_announcement@maryland.gov>
Subject: Public Comment Period Open for MWIFA Funding Documents

[Quoted text hidden]

Ken Bawer <kbawer@msn.com> Wed, Jul 29, 2026 at 8:31 PM
To: MDE WQFA_Announcement <mde.wqfa_announcement@maryland.gov>

Hi, Paul.

A friendly reminder.

Thanks,
Ken

From: Ken Bawer <kbawer@msn.com>
Sent: Tuesday, July 28, 2026 11:35 AM

To: MDE WQFA_Announcement <mde.wqfa_announcement@maryland.gov>
Subject: Re: Public Comment Period Open for MWIFA Funding Documents

[Quoted text hidden]

Ken Bawer <kbawer@msn.com> Thu, Jul 30, 2026 at 9:26 PM
To: "mde.wqfa_announcement@maryland.gov" <mde.wqfa_announcement@maryland.gov>

Hi.
[Quoted text hidden]

MDE WQFA_Announcement <mde.wqfa_announcement@maryland.gov> Mon, Aug 3, 2026 at 12:17 PM
To: Paul S Emmart -MDE- <paul.emmart@maryland.gov>
Cc: Garon Lizana -MDE- <garon.lizana@maryland.gov>

[Quoted text hidden]

Ken Bawer <kbawer@msn.com> Thu, Aug 6, 2026 at 4:00 PM
To: MDE WQFA_Announcement <mde.wqfa_announcement@maryland.gov>
Cc: "Friedson's Office, Councilmember" <councilmember.friedson@montgomerycountymd.gov>, "Balcombe's Office, Councilmember" <councilmember.balcombe@montgomerycountymd.gov>, "Councilmember.Evans@montgomerycountymd.gov" <councilmember.evans@montgomerycountymd.gov>, "Councilmember.Katz@montgomerycountymd.gov Katz" <councilmember.katz@montgomerycountymd.gov>, Councilmember Dawn Luedtke <Councilmember.Luedtke@montgomerycountymd.gov>, "councilmember.jawando@montgomerycountymd.gov" <councilmember.jawando@montgomerycountymd.gov>, "Mink's Office, Councilmember" <councilmember.mink@montgomerycountymd.gov>, Kate Stewart <councilmember.stewart@montgomerycountymd.gov>, "councilmember.sayles@montgomerycountymd.gov" <councilmember.sayles@montgomerycountymd.gov>, Evan Glass <councilmember.glass@montgomerycountymd.gov>, Natali Fani-Gonzalez <councilmember.fani-gonzalez@montgomerycountymd.gov>, "Marc.Elrich@montgomerycountymd.gov" <Marc.Elrich@montgomerycountymd.gov>, Claire Iseli <claire.iseli@montgomerycountymd.gov>, "dale.tibbitts@montgomerycountymd.gov" <dale.tibbitts@montgomerycountymd.gov>, "Hochberg, Adriana" <Adriana.Hochberg@montgomerycountymd.gov>, "debbie.spielberg@montgomerycountymd.gov" <debbie.spielberg@montgomerycountymd.gov>

Hello MWIFA.

Would you kindly confirm receipt of my attached comments?

Funding for the $25M[1] Montgomery County MS4 Permit - Water Quality Improvement Projects in the IUP should be denied because it includes stream “restorations”.

- Per the Maryland DRAFT Project Priority List for Federal FY2025 & State FY2027, Clean Water Funds (State Revolving Loan/ State Grant) dated Friday, August 15, 2025, the Project Description includes “IMPLEMENT STREAM RESTORATION AND GREEN INFRASTRUCTURE PROJECTS IN 9 SITES ACROSS THE COUNTY,”

Stream “restorations” do not meet the requirements of the Water Quality Revolving Loan Fund Program since:

1) they are not “green” projects,
2) they do not “further the water quality and public health objectives of the CWA,”
3) they have no “cost efficiency,”
4) they have no “sustainability,” and
5) they lack co-benefits

as required in the “MARYLAND WATER INFRASTRUCTURE FINANCING ADMINISTRATION WATER QUALITY REVOLVING LOAN FUND PROGRAM FEDERAL FISCAL YEAR 2026 FINAL INTENDED USE PLAN July 2026”[2] as explained in our attached comments.

Regards,

Ken Bawer

Coalition to Stop Stream Destruction

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[1]https://mde.maryland.gov/programs/water/WQFA/Documents/%233_MD%20WQ%20SRF%20FFY26%20IUP%20Narrative_21Jul2026.pdf
[2]https://mde.maryland.gov/programs/water/WQFA/Documents/%233_MD%20WQ%20SRF%20FFY26%20IUP%20Narrative_21Jul2026.pdf

From: paul.emmart@maryland.gov <paul.emmart@maryland.gov> on behalf of MDE WQFA_Announcement <mde.wqfa_announcement@maryland.gov>
Sent: Thursday, July 23, 2026 8:38 AM
To: MDE WQFA_Announcement <mde.wqfa_announcement@maryland.gov>
Subject: Public Comment Period Open for MWIFA Funding Documents

[Quoted text hidden]

2026_MWIFA WQ RLF_CSSD comment_16.pdf
1539K

MDE WQFA_Announcement <mde.wqfa_announcement@maryland.gov> Fri, Aug 7, 2026 at 10:55 AM
To: Ken Bawer <kbawer@msn.com>
Cc: "Friedson's Office, Councilmember" <councilmember.friedson@montgomerycountymd.gov>, "Balcombe's Office, Councilmember" <councilmember.balcombe@montgomerycountymd.gov>, "Councilmember.Evans@montgomerycountymd.gov" <councilmember.evans@montgomerycountymd.gov>, "Councilmember.Katz@montgomerycountymd.gov Katz" <councilmember.katz@montgomerycountymd.gov>, Councilmember Dawn Luedtke <Councilmember.Luedtke@montgomerycountymd.gov>, "councilmember.jawando@montgomerycountymd.gov" <councilmember.jawando@montgomerycountymd.gov>, "Mink's Office, Councilmember" <councilmember.mink@montgomerycountymd.gov>, Kate Stewart <councilmember.stewart@montgomerycountymd.gov>, "councilmember.sayles@montgomerycountymd.gov" <councilmember.sayles@montgomerycountymd.gov>, Evan Glass <councilmember.glass@montgomerycountymd.gov>, Natali Fani-Gonzalez <councilmember.fani-gonzalez@montgomerycountymd.gov>, "Marc.Elrich@montgomerycountymd.gov" <Marc.Elrich@montgomerycountymd.gov>, Claire Iseli <claire.iseli@montgomerycountymd.gov>, "dale.tibbitts@montgomerycountymd.gov" <dale.tibbitts@montgomerycountymd.gov>, "Hochberg, Adriana" <Adriana.Hochberg@montgomerycountymd.gov>, "debbie.spielberg@montgomerycountymd.gov" <debbie.spielberg@montgomerycountymd.gov>, Paul S Emmart -MDE- <paul.emmart@maryland.gov>

Good morning, Ken,

Thank you for your comments. We can confirm receipt of them and will address them jointly with any other comments received at the end of the comment period. These responses will be compiled in a comment response document, which will be published and submitted to EPA in fall 2026.

If you have any further comments or questions, please send them to this email address.

Best regards,
MWIFA team
[Quoted text hidden]

Maryland

Paul Emmart <paul.emmart@maryland.gov>

Public Comment Period MWIFA: Question re Montgomery Co MS4

2 messages

Paul Emmart <paul.emmart@maryland.gov> Mon, Aug 3, 2026 at 2:30 PM
To: Ken Bawer <kbawer@msn.com>
Cc: Garon Lizana -MDE- <garon.lizana@maryland.gov>, Madhulika Nataraja -MDE- <madhulika.nataraja@maryland.gov>

Hi Ken,

Thanks for reaching out to us about the Montgomery County project identified on the Intended Use Plan (IUP), but omitted from the Project Priority List (PPL).

The reason why the project was added to the FFY26/SFY28 IUP is that we had an application from the county in the prior year (FFY25/SFY27) for the same project which were unable to fully fund. Normally we try to provide anywhere up to approximately $20M for clean water/water quality improvement projects, however, the county requested $46M and we were only able to provide $25M (see the attached IUP and PPL from last year). This year we had additional funding and wanted to complete the request by adding $21M, bringing the total to the requested amount. Unfortunately, we can do only periodically as requests have become much larger in recent years and we make an effort to spread the funding out as much as possible to meet the greatest needs.

The primary difference between the PPL and the IUP is that the former is an evaluation of all the applications received, which in this case for the FFY26/SFY28 cycle did not include Montgomery's -- although we can add it to the PPL based on your feedback for completeness --- while the latter IUP includes a table of those pojects which have been selected for funding. The PPL does not include any recommendation as to an allocation amount. All recommendations we make are subject to EPA approval when MDE submits its application for capitalization grants to support the CW & DW SRF Programs.

Hope that answers your questions. If you have further questions, please let me know.

Best regards,
Paul

---------- Forwarded message ---------
From: **Ken Bawer** <kbawer@msn.com>
Date: Tue, Jul 28, 2026 at 11:35 AM
Subject: Re: Public Comment Period Open for MWIFA Funding Documents
To: MDE WQFA_Announcement <mde.wqfa_announcement@maryland.gov>

Hi, Paul.

I see that Montgomery County has a listed project in Table #1 Draft Water Quality IUP Table 1.

However, that project is not shown in Table #2 Draft Water Quality PPL.

Does that mean that although the Mo Co project ranked high enough to be shown in #1, it did not make the final cut in #2 and will therefore not be considered for funding?

Also, the description below for Table #2 says that it includes project details, but it doesn't appear to have any more details than in Table #1. Am I missing something?

Thanks,

Ken Bawer

--

PAUL EMMART

Chief, Finance Division
Maryland Water Infrastructure Financing Administration
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230
paul.emmart@maryland.gov
(410) 537-3908 (O)

Web | Facebook | X | Instagram | YouTube | LinkedIn

2 attachments

FFY 25 CW IUP Table 1.pdf
157K

FFY25 SFY27 CW PPL.pdf
281K

Ken Bawer <kbawer@msn.com> Wed, Aug 5, 2026 at 3:55 PM
To: Paul Emmart <paul.emmart@maryland.gov>

Paul,

Thanks.

Ken

From: Paul Emmart <paul.emmart@maryland.gov>
Sent: Monday, August 3, 2026 2:30 PM
To: Ken Bawer <kbawer@msn.com>
Cc: Garon Lizana -MDE- <garon.lizana@maryland.gov>; Madhulika Nataraja -MDE- <madhulika.nataraja@maryland.gov>
Subject: Public Comment Period MWIFA: Question re Montgomery Co MS4

[Quoted text hidden]

Coalition to Stop Stream Destruction

August 6, 2026

TO: Maryland Department of the Environment
Maryland Water Infrastructure Financing Administration (MWIFA)
mde.wqfa_announcement@maryland.gov

SUBJECT: Comment on Federal FY2026/State FY2028 funding cycle.

References: Maryland Water Infrastructure Financing Administration (MWIFA)[1]
#1 Draft Water Quality IUP Table 1[2]

Position: Deny $25M funding for Montgomery County MS4 Permit - Water Quality Improvement Project in TABLE 1: WQSRF FFY 2026 IUP PROJECT FUNDING LIST (#1 Draft Water Quality IUP Table 1[3])

Dear MWIFA:

The Coalition to Stop Stream Destruction (CSSD) is an all-volunteer grass-roots group of concerned residents that has been studying stream infrastructure stabilization and engineered stream "restoration" projects throughout the region for several years to determine their need and efficacy.

Funding for the following Water Quality / Clean Water project in the IUP should be denied because it includes stream "restorations":

- $25M[4] Montgomery County MS4 Permit - Water Quality Improvement Projects
    - Per the Maryland DRAFT Project Priority List for Federal FY2025 & State FY2027, Clean Water Funds (State Revolving Loan/ State Grant) dated Friday, August 15, 2025, the Project Description includes "IMPLEMENT STREAM RESTORATION AND GREEN INFRASTRUCTURE PROJECTS IN 9 SITES ACROSS THE COUNTY,"

Detailed explanations are provided below.

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Stream "restorations" violate other aspects of the Clean Water Act 8
Stream "restorations" have no "cost efficiency" 10

[1] https://mde.maryland.gov/programs/water/WQFA/Pages/index.aspx
[2] https://mde.maryland.gov/programs/water/WQFA/Documents/%231_WQ%20SRF%20FFY2026%20IUP%20Table%201_21Jul2026.pdf
[3] https://mde.maryland.gov/programs/water/WQFA/Documents/%231_WQ%20SRF%20FFY2026%20IUP%20Table%201_21Jul2026.pdf
[4] https://mde.maryland.gov/programs/water/WQFA/Documents/%233_MD%20WQ%20SRF%20FFY26%20IUP%20Narrative_21Jul2026.pdf

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Funding for the $25M[5] Montgomery County MS4 Permit - Water Quality Improvement Projects in the IUP should be denied because it includes stream "restorations".

- Per the Maryland DRAFT Project Priority List for Federal FY2025 & State FY2027, Clean Water Funds (State Revolving Loan/ State Grant) dated Friday, August 15, 2025, the Project Description includes "IMPLEMENT STREAM RESTORATION AND GREEN INFRASTRUCTURE PROJECTS IN 9 SITES ACROSS THE COUNTY,"

Stream "restorations" do not meet the requirements of the Water Quality Revolving Loan Fund Program since:

1) they are not "green" projects,
2) they do not "further the water quality and public health objectives of the CWA,"
3) they have no "cost efficiency,"
4) they have no "sustainability," and
5) they lack co-benefits

as required in the "MARYLAND WATER INFRASTRUCTURE FINANCING ADMINISTRATION WATER QUALITY REVOLVING LOAN FUND PROGRAM FEDERAL FISCAL YEAR 2026 FINAL INTENDED USE PLAN July 2026"[6] as follows:

- "The State of Maryland is committed to using the capitalization grant funds ("capitalization grants") for which MWIFA is applying to provide funding for eligible water quality improvements from point and nonpoint source capital projects, including eligible "green" projects, that will further the water quality and public health objectives of the CWA." (Emphasis added).
- "The MWIFA has actively solicited "green" projects to be included in the FFY 2026 IUP for funding to help restore Maryland's waterways as part of the larger Chesapeake Bay restoration goals. Green projects are integral to the innovative approach Maryland has taken through the Chesapeake Bay WIP to address water quality issues throughout the Maryland portion of the Bay watershed." (Emphasis added).
- "State law was amended to emphasize the financing of blue and green infrastructure…." (Emphasis added).

[5] https://mde.maryland.gov/programs/water/WQFA/Documents/%233_MD%20WQ%20SRF%20FFY26%20IUP%20Narrative_21Jul2026.pdf
[6] https://mde.maryland.gov/programs/water/WQFA/Documents/%233_MD%20WQ%20SRF%20FFY26%20IUP%20Narrative_21Jul2026.pdf

- "The IPPS focuses on the proposed project water quality benefits, documented public health concerns, relative effectiveness of nutrient reduction to the Chesapeake Bay, compliance status, cost efficiency, and co-benefits including climate mitigation, adaptation, and resiliency, and sustainability."

The $25M[7] Montgomery County MS4 Permit - Water Quality Improvement Project does not meet the requirements of the Water Quality Revolving Loan Fund Program as defined by MWIFA above and as explained below.

Stream "restorations" do not provide water quality improvements

The purported benefits of engineered stream "restorations" are not supported by the published science and observations on the ground. The Chesapeake Bay Program Expert Panel Report[8] acknowledges that engineered stream "restorations" do not stop erosion. Published papers[9] analyzed over 700 engineered stream "restorations" to show that water quality and ecological function are not improved and are sometimes made worse. The work of Kaushal et. al.[10] showed that the removal of trees during "stream restorations'' would lead to higher riparian groundwater nutrient concentrations and therefore higher stream pollutant levels.

A few claims of "successful" projects do not disprove the preponderance of evidence. See a one-page fact sheet in Appendix 2. Even Montgomery County Department of Environmental Protection (DEP) admits that none of their projects improved stream ecology as measured by standard Benthic Macro-Invertebrate (BIBI) analyses.

[7] https://mde.maryland.gov/programs/water/WQFA/Documents/%233_MD%20WQ%20SRF%20FFY26%20IUP%20Narrative_21Jul2026.pdf

[8] https://chesapeakestormwater.net/wpcontent/uploads/2022/07/9928-1.pdf

[9] Palmer, M. A., K. L. Hondula, and B. J. Koch, University of MD, 2014, "Ecological Restoration of Streams and Rivers: Shifting Strategies and Shifting Goals,", Annu. Rev. Ecol. Evol. Syst. 2014. 45:247-269. (https://akottkam.github.io/publications/Palmerpublications/Palmer2014a.pdf);
Hilderbrand, Robert H., et. al.,2020, "Quantifying the ecological uplift and effectiveness of differing stream restoration approaches in Maryland," Final Report Submitted to the Chesapeake Bay Trust for Grant #13141, (https://cbtrust.org/wp-content/uploads/Hilderbrand-et-al_Quantifying-the-Ecological-Uplift.pdf;
Southerland, M., et. al., 2021, "Vertebrate Community Response to Regenerative Stream Conveyance Restoration as a Resource Trade-Off," CBT Research Grant; https://cbtrust.org/wp-content/uploads/FINAL-Report-for-18002-Tetra-Tech-CBL-CBT-RR-Vertebrates-in-RSCs-30SEP2021-Submitted-to-CBT.pdf.
Carr, J., Hart, D., McNair, J., 2006, "Compilation and Evaluation of Stream Restoration Projects: Learning from Past Projects to Improve Future Success," The Patrick Center for Environmental Research, The Academy of Natural Sciences of Drexel University, Report Submitted to the William Penn Foundation.
https://ansp.org/research/environmental-research/projects/restoration/

[10] Kaushal, Sujay S. et. al. (2018). "Tree Trade-offs in Stream Restoration Projects: Impact on Riparian Groundwater Quality," University of Maryland, State University of New York ESF, Maryland Department of Transportation State Highway Administration, 2018 Presentation: https://cbtrust.org/wp-content/uploads/Kaushal-and-Wood_UMD_061219.pdf

The way to "fix" streams is to control stormwater outside of streams by using green, non-destructive, upland (out-of-stream) practices such as raingardens, bioswales, permeable pavement, tree planting, etc. as documented in MDE's Accounting Guidance document[11].

Stream "restorations" are not green projects

MDE's definition of green stormwater infrastructure **does not include stream "restorations**." MDE's definition of green stormwater infrastructure is as follows:

- Green stormwater infrastructure includes all the practices listed in the 2021 Accounting Guidance[12] that meet the requirements in "Table 19. Eligibility for Green Stormwater Infrastructure Credits," and "Table 20. Green Stormwater Infrastructure Enhanced Features," as well as the practices that meet the requirements of Section V.3. Land Cover Conversion BMPs.
- Per MDE's 2021 Accounting Guidance[13],
    - "The Green Stormwater Infrastructure (GSI) credit is provided when a BMP provides water quality treatment and incorporates natural processes using vegetation and soils. BMPs with enhanced design features that use natural processes provide healthy, sustainable, and functional ecosystems."

The $25M[14] Montgomery County MS4 Permit - Water Quality Improvement Projects description includes an "IMPLEMENT STREAM RESTORATION" component that does not meet MDE's own definition of "green" projects. Therefore, this project should not receive funding unless "stream restorations" are removed.

The reason "stream restorations" are not "green" projects is further explained below.

According to Fraley-McNeal et. al (2022),[15] the negative impacts of stream "restorations" from these construction projects include:

- Tree & ecosystem services loss

[11] "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits," November 2021 https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Documents/Final%20Determination%20Dox%20N5%202021/MS4%20Accounting%20Guidance%20FINAL%2011%2005%202021.pdf

[12] https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Documents/Final%20Determination%20Dox%20N5%202021/MS4%20Accounting%20Guidance%20FINAL%2011%2005%202021.pdf

[13] Ibid.

[14] https://mde.maryland.gov/programs/water/WQFA/Documents/%233_MD%20WQ%20SRF%20FFY26%20IUP%20Narrative_21Jul2026.pdf

[15] Fraley-McNeal, L. et al. (2022), "Maintaining Forests in Stream Corridor Restoration and Sharing Lessons Learned," Center for Watershed Protection; https://owl.cwp.org/mdocs-posts/maintaining-forests-in-stream-corridor-restoration-and-sharing-lessons-learned-final-report/

  - "…years of ecosystem maturation may be needed before a project fully meets its long-term restoration objectives and realizes its full environmental benefits (Kaushal et al., 2021[16]; Wood et al., 2021[17])."
  - "For projects that involve floodplain reconnection, mortality of trees in the riparian zone may occur as soils are inundated over time."
  - "When mature trees are removed, they cannot be replaced with similar-sized trees that perform the same ecological functions."
- Temperature Impacts
  - "Loss of existing trees in the riparian zone from stream restoration implementation occurs either through direct removal during construction or mortality afterwards due to increased groundwater elevations and/or extended inundation of the floodplain, compaction, and root disturbance from construction activities. ...There is a direct link between riparian forests and stream temperature, which is a critical metric of stream health."
  - "…impact to a stream's thermal regime…. Protecting thermal regimes in streams is important for a variety of reasons, including maintaining spawning habitat and healthy conditions for fish, reducing algal growth, reducing populations of parasites that favor warmer temperatures, and regulating nutrient/carbon/oxygen dynamics, since temperature affects the dynamics of many gaseous and aqueous compounds (Demars et al., 2011; Mayer et al., 2010; Wilkerson et al., 2006). …There is evidence that stream temperatures increase post-restoration (Fanelli et al., 2017; Sudduth et al., 2011)."
- Biologic, Habitat, & Water Quality Impacts
  - "When trees are removed for stream restoration projects, the critical habitat provided by their canopy and root systems is also removed. Although removed trees are typically replanted in-kind, the maturation of the restored vegetation can take many years."
  - "Recent work by Wood et al. (2021) and Kaushal et al. (2021) demonstrated that tree removal during stream restoration construction can trigger sub-surface fluxes of nutrients out of the riparian zone and into the stream…." This defeats the purpose of the stream "restoration."
  - "It is important to note that the post-restoration recovery of the ecosystem as a whole typically takes many years."
  - "Some studies have found either no evidence or very limited evidence that stream restoration projects in urban watersheds have the potential to improve habitat quality in a meaningful or reliable way, partially due to the influence of the contributing drainage area to the stream (Hilderbrand, 2020; Hilderbrand et al., 2015; Violin et al., 2011)."
  - "However, it is clear that the removal of mature trees during restoration physically alters the available habitat in a stream-riparian system, and those physical alterations have

[16] Kaushal, S. S., Wood, K. L., Vidon, P. G., & J. G. Galella. 2021. Tree Trade-Offs in Stream Restoration Projects: Impact on Riparian Groundwater Quality. A Report Submitted to the Chesapeake Bay Trust. Retrieved from: https://cbtrust.org/wp-content/uploads/Tree-Trade-off_University-of-Maryland-College-Park_Kaushal_final_report_032921.pdf

[17] Wood, D., Schueler, T., and B. Stack. 2021. A Unified Guide for Crediting Stream and Floodplain Restoration Projects in the Chesapeake Bay Watershed. https://chesapeakestormwater.net/wp-content/uploads/dlm_uploads/2021/10/Unified-Stream-Restoration-Guide_FINAL_9.17.21.pdf

coincidental effects on stream-water chemistry. Both of these restoration-related changes—physical and chemical—affect the biological uplift provided by a restored stream."

- Inundation Impacts from Floodplain Reconnection
    - "Stream restoration projects that enhance floodplain reconnection can impact existing riparian vegetation species due to increased groundwater elevations and/or extended inundation of the floodplain. Flooding may reduce upland tree species root growth which may lead to decline, death, and decay over time (Coder, 1994)."

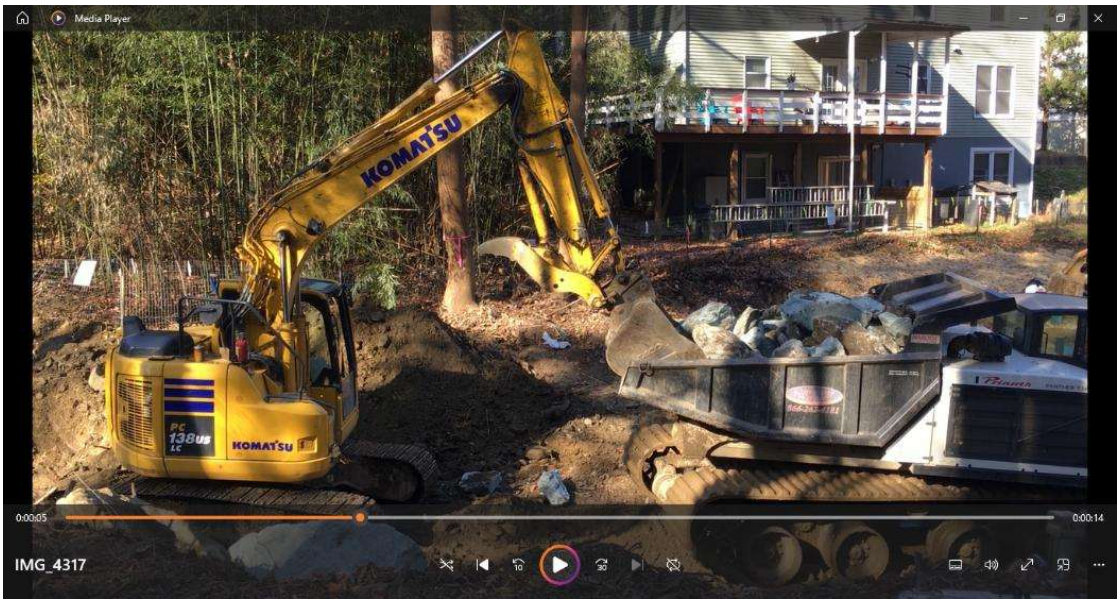
Stream "restorations" have harmful impacts on human health which violate public health objectives of the Clean Water Act (CWA)

One negative result of stream "restorations" rather than the use of out-of-stream stormwater control projects, is that pollutants from roads such as oil, grease, salt, toxic tire dust, and trash are washed into our natural areas where they are harmful to humans as well as the plants and animals. This can be avoided by keeping stormwater runoff from roads out of streams in the first place.

A Washington Post article that interviewed people from the Anacostia Riverkeeper group said that out-of-stream stormwater control practices such as "…rain gardens can intercept pollutants before they reach rivers. Sediment picked up by storm water can carry toxic compounds and cloud river water, harming aquatic plants and fish…. Dog waste and trash can also get washed into local waterways. Rain gardens also create green spaces in cities."[18]

Stream "restoration" projects remove trees and destroy natural areas that reduce quality of life and human health. See the photograph below and others in a presentation[19] which shows the damage caused by stream "restorations." If you have not seen an engineered stream "restoration," watch a few short videos at https://www.youtube.com/@EngineeredStreamRestoration.

[18] https://www.washingtonpost.com/climate-solutions/2023/12/10/rain-garden-cities/
[19] https://drive.google.com/file/d/1GDN1FAzim8Bx6K5s5y8VD0xjtp0ok5vA/view



(Glenallan engineered stream "restoration in Montgomery County, 11/18/2024)

Regarding the impact of tree removal on air quality, Scenic America says "Trees reduce air pollution and help to purify the air by absorbing carbon and other pollutants. A mature tree absorbs between 120-240 pounds per year of small particles and gases, like carbon dioxide, which are released into the air by automobiles and industrial facilities."[20]

According to Scenic America, "Excessive or unwanted sound has negative physical and psychological effects. Noise can come from many sources, especially roads and highways. Trees can play an important role in deadening unwanted noise. Sound waves are absorbed by a tree's leaves, branches, and twigs. Studies suggest that belts of trees 100 feet wide and 45 feet long can cut highway noise in half."[21]

An article in Scientific American says the "…idea that loud noise 'can't be good' is well supported by science. Noise can damage more than just your ears. Through daytime stress and nighttime sleep disturbances, loud sounds can hurt your heart and blood vessels, disrupt your endocrine system, and make it difficult to think and learn."[22]

The Nature Conservancy says that "Research has linked the presence of urban trees to reduced obesity, better stormwater management, increased property values, reduced stress, fewer particulate pollutants, cooler city streets, reduced disease rates, and increased biodiversity."[23] The more stream "restorations" that are done, the fewer tree planting projects such as forest planting, riparian forest planting, and urban tree canopy planting will be done for the MS4 permit.

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[20] Scenic America, "Benefits of Trees," https://www.scenic.org/why-scenic-conservation/placemaking-and-community-planning/tree-conservation-and-native-planting/benefits-of-trees

[21] Ibid

[22] "Quiet! Our Loud World Is Making Us Sick," by Joanne Silberner, Scientific American, APRIL 16, 2024 https://www.scientificamerican.com/article/everyday-noises-can-hurt-hearts-not-just-ears-and-the-ability-to-learn/

[23] Green Heart Project in Louisville, KY; https://www.nature.org/en-us/about-us/where-we-work/united-states/kentucky/stories-in-kentucky/green-heart-project/

In a September 8, 2021, interview on WBUR's Radio Boston, Peter James, assistant professor in Harvard T.H. Chan School of Public Health's Department of Environmental Health, said that trees' effects on us "translate into long-term changes in the incidence of depression, anxiety, cognitive decline, and chronic diseases including cardiovascular disease and cancer."[24]

Stream "restorations" clearcut sections of riparian forest which raises ambient temperatures. According to the EPA, "Trees and other plants help cool the environment, making vegetation a simple and effective way to reduce urban heat islands."[25]

The floodplain reconnection method of stream "restoration" increases mosquito habitat when the receding water leaves behind pools of stagnant water. Maryland Department of Agriculture lists mosquito diseases as Dengue (Break-Bone Fever), Encephalitides, Malaria, Yellow Fever, and Zika.[26]

Out-of-stream stormwater control practices in areas that are already disturbed avoid destruction of the countless numbers of trees, shrubs, grasses, and flowering forbs that happens during a stream "restoration" project.

The $25M[27] Montgomery County MS4 Permit - Water Quality Improvement Project does not "further the water quality and public health objectives of the CWA" as required by the MARYLAND WATER INFRASTRUCTURE FINANCING ADMINISTRATION WATER QUALITY REVOLVING LOAN FUND PROGRAM FEDERAL FISCAL YEAR 2026 FINAL INTENDED USE PLAN July 2026".[28]

Stream "restorations" violate other aspects of the Clean Water Act

Stream "restorations" do not provide water quality improvements

Per the 2018 version of the Clean Water Act (CWA) from the U.S. Code, title 33, chapter 26, section 1251 titled "Congressional declaration of goals and policy," the objective of the Act is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[29] (emphasis added).

Likewise, the USACE Baltimore District website states, "The objective of the Clean Water Act (CWA) is 'to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.'"[30] (emphasis added).

The preponderance of scientific evidence - published papers that analyzed over 700 engineered stream "restorations" - shows that water quality and ecological function are not improved and are made

[24] https://www.hsph.harvard.edu/news/hsph-in-the-news/the-health-benefits-of-trees/
[25] https://www.epa.gov/heatislands/using-trees-and-vegetation-reduce-heat-islands
[26] https://mda.maryland.gov/plants-pests/Pages/mosquitoes_disease.aspx
[27] https://mde.maryland.gov/programs/water/WQFA/Documents/%233_MD%20WQ%20SRF%20FFY26%20IUP%20Narrative_21Jul2026.pdf
[28] https://mde.maryland.gov/programs/water/WQFA/Documents/%233_MD%20WQ%20SRF%20FFY26%20IUP%20Narrative_21Jul2026.pdf
[29] https://www.govinfo.gov/content/pkg/USCODE-2018-title33/pdf/USCODE-2018-title33-chap26.pdf, page 328.
[30] https://www.nab.usace.army.mil/Missions/Regulatory/Mitigation/

sometimes made worse.[31] **Therefore, the use of stream "restorations" for MS4 permit credits cannot be allowed since these practices do not meet the CWA's goal to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."**

Per the EPA's Summary of the Clean Water Act, "The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained: EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges."[32]

One of the CWA and National Pollutant Discharge Elimination System (NPDES)[33] water quality requirements is to "Effectively prohibit pollutants in stormwater discharges or other unauthorized discharges into, through, or from the MS4 as necessary to comply with Maryland's receiving water quality standards." Stream "restorations" do not prevent pollutants in stormwater discharges *into, through, or from* the Municipal Separate Storm Sewer System (MS4) since stream "restorations" are downstream from MS4 system outfalls (which are considered point sources). Stream "restorations" do not capture or treat any stormwater prior to stormwater entering the MS4 system. Stream "restorations" do nothing to prevent upland MS4 stormwater pollutants from entering streams. Since so-called stream "restorations" meet none of these requirements, they violate the CWA, should not be allowed in an MS4 Permit, and should not be funded by MWIFA**.**

The 2024 Chesapeake Bay Program (CBP) Scientific and Technical Advisory Committee (STAC) workshop report on stream "restoration"[34] states that "biological improvement is a condition of CWA permits." Since stream "restorations" do not meet the CWA's requirement to result in biological improvement per the preponderance of the scientific literature (published papers that analyzed over 700 engineered stream "restorations" - shows that water quality and ecological function are not improved and are

[31] Palmer, M. A., K. L. Hondula, and B. J. Koch, University of MD, 2014, "Ecological Restoration of Streams and Rivers: Shifting Strategies and Shifting Goals,", Annu. Rev. Ecol. Evol. Syst. 2014. 45:247-269. (https://akottkam.github.io/publications/Palmerpublications/Palmer2014a.pdf);
Hilderbrand, Robert H., et. al.,2020, "Quantifying the ecological uplift and effectiveness of differing stream restoration approaches in Maryland," Final Report Submitted to the Chesapeake Bay Trust for Grant #13141, (https://cbtrust.org/wp-content/uploads/Hilderbrand-et-al_Quantifying-the-Ecological-Uplift.pdf;
Southerland, M., et. al., 2021, "Vertebrate Community Response to Regenerative Stream Conveyance Restoration as a Resource Trade-Off," CBT Research Grant; https://cbtrust.org/wp-content/uploads/FINAL-Report-for-18002-Tetra-Tech-CBL-CBT-RR-Vertebrates-in-RSCs-30SEP2021-Submitted-to-CBT.pdf.
Carr, J., Hart, D., McNair, J., 2006, "Compilation and Evaluation of Stream Restoration Projects: Learning from Past Projects to Improve Future Success," The Patrick Center for Environmental Research, The Academy of Natural Sciences of Drexel University, Report Submitted to the William Penn Foundation.
https://ansp.org/research/environmental-research/projects/restoration/

[32] https://www.epa.gov/laws-regulations/summary-clean-water-act

[33] https://www.epa.gov/npdes/npdes-permit-basics

[34] Noe, G., N. Law, J. Berg, S. S. Filoso, Drescher, L. Fraley-McNeal, B. Hayes, P. Mayer, C. Ruck, B. Stack, R. Starr, S. Stranko, and T. Thompson. 2024. The State of the Science and Practice of Stream Restoration in the Chesapeake: Lessons Learned to Inform Better Implementation, Assessment and Outcomes. STAC Publication Number 24-005, Edgewater, MD. 90 pp, https://www.chesapeake.org/stac/events/the-state-of-the-science-and-practice-of-stream-restoration-in-the-chesapeake-lessons-learned-to-inform-better-implementation-assessment-and-outcomes/

sometimes made worse.[35]), they should not be approved for a Revolving Load Fund loan nor allowed in MS4 permits.

The original intent of the MS4 permitting system was to treat pollutants in urban stormwater runoff before it enters waterways. Stream "restorations" do nothing to accomplish this and thus are in violation of the CWA and MS4 permit. It remains to be uncovered why stream "restorations" were ever added to the list of accepted MS4 permitted practices in Maryland MDE's Accounting Guidance document[36]. Presumably, it was due to an intense lobbying effort by the $25 billion stream "restoration" industry and others that stood to gain financially. As with most things of this nature, following the money usually uncovers the motivation.

It is clear that stream "restorations" violate the NPDES MS4 permit and thus the CWA.

Stream "restorations" have no "cost efficiency"

The $25B stream "restoration" industry and their supporters often claim that steam "restorations" are the most cost-effective way to meet MS4 permits. In fact, Maryland Department of the Environment (MDE) has statewide data from the 2022 Annual Report on Financial Assurance Plans (FAPs)[37] showing there are twenty non-destructive, out-of-stream project types that are more cost effective than so-called stream "restorations." Please see the details in Appendix 1.

What should really be compared are lifecycle costs which includes cost of construction, maintenance, and repair, but MDE does not provide that information. Some examples of washed-out projects in need of repair in Montgomery County alone include Josephs Branch in Kensington, Cabin John Creek near Montgomery Mall, Long Branch in Takoma Park, Snakeden Branch in Potomac, Bedfordshire Tributary in Potomac, Old Farm Creek in North Bethesda (scheduled to be repaired in for $800K), the Grosvenor Luxmanor project in North Bethesda (scheduled to be repaired for $4.8M), and Lower Booze Creek in Potomac (repaired for $3.6M). Stream "restoration" companies typically only guarantee their work for

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[35] Palmer, M. A., K. L. Hondula, and B. J. Koch, University of MD, 2014, "Ecological Restoration of Streams and Rivers: Shifting Strategies and Shifting Goals,", Annu. Rev. Ecol. Evol. Syst. 2014. 45:247-269. (https://akottkam.github.io/publications/Palmerpublications/Palmer2014a.pdf);
Hilderbrand, Robert H., et. al.,2020, "Quantifying the ecological uplift and effectiveness of differing stream restoration approaches in Maryland," Final Report Submitted to the Chesapeake Bay Trust for Grant #13141, (https://cbtrust.org/wp-content/uploads/Hilderbrand-et-al_Quantifying-the-Ecological-Uplift.pdf;
Southerland, M., et. al., 2021, "Vertebrate Community Response to Regenerative Stream Conveyance Restoration as a Resource Trade-Off," CBT Research Grant; https://cbtrust.org/wp-content/uploads/FINAL-Report-for-18002-Tetra-Tech-CBL-CBT-RR-Vertebrates-in-RSCs-30SEP2021-Submitted-to-CBT.pdf.
Carr, J., Hart, D., McNair, J., 2006, "Compilation and Evaluation of Stream Restoration Projects: Learning from Past Projects to Improve Future Success," The Patrick Center for Environmental Research, The Academy of Natural Sciences of Drexel University, Report Submitted to the William Penn Foundation.
https://ansp.org/research/environmental-research/projects/restoration/

[36] "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits, https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Documents/Final%20Determination%20Dox%20N5%202021/MS4%20Accounting%20Guidance%20FINAL%2011%2005%202021.pdf

[37] https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Pages/WPRPFinancialAssurancePlans.aspx

one year. After that, taxpayers pick up the bill. Thus, it is almost meaningless to only compare the cost of construction of different practices.

Financial comparisons of stormwater control practices should also include a monetization of ecosystem services. Montgomery County Department of Environmental Protection's website states that "Trees contribute to the economic and social vitality of every community. Trees clean the air and water, reduce the cost of cooling and heating homes and businesses, increase biodiversity and increase our general sense of well-being."[38] DEP also says, "Trees are one of the most cost-effective means of helping to clean our air and water, reduce our energy usage, and improve the quality of our lives."[39] And yet, MDE continues to approve the clearcutting of countless trees, shrubs, and other forest plants in our natural areas for stream "restorations" without reporting the monetary costs of so doing.

Therefore, MS4 permit crediting in the Accounting Guidance[40] should attempt to monetize the value of the ecosystem services (i.e., functions) that are lost from stream "restorations" and gained by non-destructive stormwater control practices. For example, MDE could monetize the fact that "Research has linked the presence of urban trees to reduced obesity, …increased property values, reduced stress, …cooler city streets [which would decrease air conditioning costs], [and] reduced disease rates…."[41] This would certainly show that out-of-stream stormwater control is even more cost effective than what the current 2022 Annual Report on Financial Assurance Plans (FAPs)[42] shows.

Stream "restorations" have no "sustainability"

Stream "restorations" are not self-sustaining as shown in Palmer's analysis of 644 stream "restorations"[43] that less than half of them showed improvement in stabilizing channels – worse than a coin toss. Additional observations of failed Maryland projects (see photographs in a presentation[44]) show that they are being washed out because the root cause of the problem – uncontrolled stormwater runoff from impervious surfaces (roads, roofs, parking lots, etc.) fire-hosing into streams – is not addressed by doing stream "restorations."

To give an analogy, if there is a leaking roof that is damaging furniture, no one in their right mind would replace the furniture before the source of the problem is fixed, which is the leaking roof. But this is exactly what is happening with stream "restorations." Stream "restorations" are trying to repair or

[38] https://www.montgomerycountymd.gov/green/trees/laws-and-programs.html
[39] https://www.montgomerycountymd.gov/DEP/property-care/trees/plant-a-tree.html
[40] "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits," November 2021 https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Documents/Final%20Determination%20Dox%20N5%202021/MS4%20Accounting%20Guidance%20FINAL%2011%2005%202021.pdf
[41] Green Heart Project in Louisville, KY; https://www.nature.org/en-us/about-us/where-we-work/united-states/kentucky/stories-in-kentucky/green-heart-project/
[42] https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Pages/WPRPFinancialAssurancePlans.aspx
[43] Palmer, M. A., K. L. Hondula, and B. J. Koch, University of MD, 2014, "Ecological Restoration of Streams and Rivers: Shifting Strategies and Shifting Goals,", Annu. Rev. Ecol. Evol. Syst. 2014. 45:247-269. (https://akottkam.github.io/publications/Palmerpublications/Palmer2014a.pdf)
[44] https://drive.google.com/file/d/1GDN1FAzim8Bx6K5s5y8VD0xjtp0ok5vA/view

stabilize the streams before fixing the source of the problem – urban stormwater runoff. **This is simply throwing tax dollars away and it is a gross mismanagement of state funds.**

Furthermore, the need to control non-native invasive plants after stream "restoration" construction is not the definition of a self-sustaining project. Per a Chesapeake Bay Program document, "Construction disturbance and frequent inundation of the floodplain can serve as vectors for invasive species along restored… streams."[45]

Examples showing that steam "restorations" are not self-sustaining include the following costs of stream "restoration" repairs due to post-construction storm damage:

- Old Farm Creek, Montgomery Co – washed out by storms and will be repaired for $800K
- Grosvenor, Montgomery Co - washed out by storms and will be repaired for $4.8M
- Lower Booze Creek, Montgomery Co - washed out by storms and was repaired for $3.6M
- TD 2024 SHA MS4 permit repairs listed as "ADAPTIVE MANAGEMENT" in SHA MEP Analysis[46]
    - $3,014,000
    - $15,903,000

The industry guarantee is typically only for one year since they know that these projects will get damaged by future storms. After that, taxpayers pay for the repairs. If a project must be repaired, then it is not self-sustaining by definition

Rather than funding stream "restorations" that are clearly not self-sustaining, WQRLF grant funds should allow only out-of-stream stormwater control projects.

Stream "restorations" lack "co-benefits"

Stream "restorations" lack "co-benefits" compared to the many other out-of-stream stormwater control practices allowed for MS4 permits in MDE's Accounting Guidance.[47] Stream "restorations" provide none of the co-benefits that out-of-stream practices provide to communities. Among the co-benefits from out-of-stream stormwater control practices such as rain gardens, bioretentions, tree planting, and permeable pavement are decreasing heat islands (which reduces utility bills and decreases heat-related health problems), reducing urban flooding, improving air quality, increasing property values, protecting natural areas, and providing urban green spaces.

[45] CBP's "A Unified Guide to Crediting Stream and Floodplain Restoration Practices in the Chesapeake Bay Watershed" (9/17/2021) (a.k.a., Master Stream Restoration Guide) https://chesapeakestormwater.net/wp-content/uploads/2024/01/Unified-Document_Clean_1.12.24_updated-links.pdf , Table 19. Review of Potential Unintended Impacts Associated w/ Stream and Floodplain Restoration Projects

[46] Maximum Extent Practicable (MEP) Submission (April 2024) https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Documents/MS4/SHA/SHA_MEP_Analysis_03.22.2024.pdf

[47] "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits," November 2021 https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Documents/Final%20Determination%20Dox%20N5%202021/MS4%20Accounting%20Guidance%20FINAL%2011%2005%202021.pdf

It is a mystery as to why MDE allows MS4 permittees to inflict stream "restorations" any communities, especially disadvantaged communities. These projects do nothing to actually improve streams (published papers that analyzed over 700 engineered stream "restorations" - shows that water quality and ecological function are not improved and are sometimes made worse[48]) while resulting in cutting community trees, destroying their natural areas, increasing heat islands, decreasing air quality, and decreasing property values, while doing nothing to reduce pluvial (surface water) flooding in urban areas or to provide urban green spaces.

Montgomery County makes false statements about stream "restorations"

The following comments are CSSD comments on Montgomery County Department of Environmental Protection's response to call for ban on engineered stream "restorations".

CSSD comments on Montgomery County Department of Environmental Protection's response to call for ban on stream "restorations"

(January 14, 2025)

(Revised 11/12/2025, 3/8/2026)

Below are quotes from a 12/19/2024 note from Montgomery County Department of Environmental Protection (DEP) regarding our recent call to ban stream "restorations" followed by our comments:

- "DEP cannot support your call for banning stream restoration. Our decision is based foremost on our use of knowledge, science, and data to improve and adapt our program to ensure protection of the stream riparian resources, and water quality in the County."
    - **FACT: This is disinformation. DEP has never provided scientific evidence to support their position due to the fact *there is no supporting scientific evidence*. The published science which analyzed over 700 stream "restorations", documentation of washed out**

[48] Palmer, M. A., K. L. Hondula, and B. J. Koch, University of MD, 2014, "Ecological Restoration of Streams and Rivers: Shifting Strategies and Shifting Goals,", Annu. Rev. Ecol. Evol. Syst. 2014. 45:247-269. (https://akottkam.github.io/publications/Palmerpublications/Palmer2014a.pdf);
Hilderbrand, Robert H., et. al.,2020, "Quantifying the ecological uplift and effectiveness of differing stream restoration approaches in Maryland," Final Report Submitted to the Chesapeake Bay Trust for Grant #13141, (https://cbtrust.org/wp-content/uploads/Hilderbrand-et-al_Quantifying-the-Ecological-Uplift.pdf;
Southerland, M., et. al., 2021, "Vertebrate Community Response to Regenerative Stream Conveyance Restoration as a Resource Trade-Off," CBT Research Grant; https://cbtrust.org/wp-content/uploads/FINAL-Report-for-18002-Tetra-Tech-CBL-CBT-RR-Vertebrates-in-RSCs-30SEP2021-Submitted-to-CBT.pdf.
Carr, J., Hart, D., McNair, J., 2006, "Compilation and Evaluation of Stream Restoration Projects: Learning from Past Projects to Improve Future Success," The Patrick Center for Environmental Research, The Academy of Natural Sciences of Drexel University, Report Submitted to the William Penn Foundation.
https://ansp.org/research/environmental-research/projects/restoration/

projects in Montgomery County, and ground observations of environmental damage (see references and photographs in the presentation https://drive.google.com/file/d/1dos8SmOF5_evuI8Y_CWuUMVNHZoVP1Sf/view?usp=sharing) and a video of the Glenallan stream "restoration" (https://www.youtube.com/watch?v=91O2bAdT8PY) all lead to the conclusion that these projects do not work to either stabilize streams, improve water quality, or improve ecological function. In fact, DEP has admitted that none of their past 56 projects starting in 1992 have improved stream ecology as measured by benthic macroinvertebrate improvement. There is no scientific basis for continuing the destruction caused by stream "restorations."

- **Plus, the Chesapeake Bay Program's document "A Unified Guide for Crediting Stream and Floodplain Restoration Projects in the Chesapeake Bay Watershed" has a long list of known negative impacts associated with stream restorations"[49] including**
  - **Depleted DO**
  - **Iron Flocculation**
  - **Warmer Stream Temps**
  - **More Acidic Water**
  - **More Stream Primary Production**
  - **Benthic IBI Decline**
  - **Construction Turbidity**
  - **Project Tree Removal**
  - **Post-Project Tree Loss**
  - **Invasive Plant Species**
  - **Change in Wetland Type or Function**
  - **Downstream Benthic Decline**
  - **Blockage of Fish Passage**

- "With data from scientists and engineers over the last 20 years, stream restoration has proven to be effective in addressing stream erosion and sedimentation problems and restoring stream health."
  - **FACT: This is false. DEP has never provided any published science to prove this false claim. The published science concludes that these projects do not work to either stabilize streams, improve water quality, or improve ecological function. DEP has admitted that "We have not seen benthic [macroinvertebrate] improvement in any of our stream restorations."[50] BMIs are a measure of stream health. There is no scientific basis for continuing the destruction caused by stream "restorations."**

- "The Maryland Department of the Environment (MDE) and Environmental Protection Agency (EPA) have approved the use of this practice…."
  - **FACT: DEP disingenuously uses the justification of MDE and EPA approval to GREENWASH and deflect from the fact that stream "restorations" are ineffective per**

[49] See Page 73, Table 19: https://chesapeakestormwater.org/wp-content/uploads/2024/01/Unified-Document_Clean_1.12.24_updated-links.pdf f

[50] . Per Montgomery Co. DEP in Stormwater Partners meeting (1/16/2024).

the published science and destructive per our own observations (see references and photographs in the presentation at https://drive.google.com/file/d/1dos8SmOF5_evuI8Y_CWuUMVNHZoVP1Sf/view?usp=sharing**) and a** video of the Glenallan stream "restoration" (https://www.youtube.com/watch?v=91O2bAdT8PY)**. Neither MDE nor EPA mandate the use of stream "restorations." Per an EPA letter dated 11/6/2024, "EPA does not direct states or localities on which BMPs [stormwater control projects] are used to reduce pollutant loads…." Note that EPA has approved the use of dirty coal fired power plants, but that does not make them environmentally acceptable. As everyone knows, "The right to do something does not mean that doing it is right," in the words of William Safire.**

- "DEP chose to fund the Glenallan project due to erosion complaints…."
  - **FACT: DEP should fund projects based on science, not complaints. In fact, stream "restorations" *do not* stop stream erosion since the source of the problem - uncontrolled stormwater from developed areas that firehoses into streams - is not controlled. Past DEP projects are being washed out by storm events post construction. (see photos in the presentation** https://drive.google.com/file/d/1dos8SmOF5_evuI8Y_CWuUMVNHZoVP1Sf/view?usp=sharing**).**
    The only way to stop erosion if the out-of-stream stormwater is not controlled is to line a stream with concrete (see photo below) – a practice from the 1950s that fortunately has gone out of favor.



(Above photo from esa.org)

- "The Glenallan Tributary suffered from… a stream channel devoid of aquatic habitat."
  - **FACT: This is FALSE and ridiculous on its face. It shows a misunderstanding of basic ecological principles and terminology. Pre-construction photos from the Public**

Meeting presentation on October 24, 2017 show various existing aquatic habits along the entire length of the proposed project.

- "Our technical review of the video you referenced confirms the project is being executed properly with careful protection of trees, best professional techniques for temporary haul roads, and proper placement of rock material to stabilize the stream. Only selective tree removal has occurred…."
    - **FACT: This is typical DEP greenwashing. DEP asks that we not believe our eyes when the video of the Glenallan stream "restoration" (https://www.youtube.com/watch?v=91O2bAdT8PY) shows wanton clearcutting of the riparian forest, piles of cut mature trees, a temporary haul road that slices through the forest, and imported rock rubble being haphazardly dumped, not placed, into the stream. The few trees with scrape protectors attached to their trunks will most probably die due to soil compaction of their critical root zones and hydrologic changes caused by heavy construction equipment and tree removal.**

- "During stream restoration projects, every effort is made to improve growing conditions for trees, prioritize healthy and mature trees for retention, and minimize the number of trees removed."
    - **This is typical DEP greenwashing and Orwellian language. They are saying they must clearcut the stream-side trees in order to improve growing conditions. The way to minimize the number of trees removed is to not cut them in the first place.**

- "In this particular project, extensive non-native invasive plants (NNI) were cleared prior to construction, which is why the video shows cleared areas.
    - **THIS IS DISINFORMATION. The video shows cleared areas because the forest was clear-cut of ALL plants – mature trees, shrubs, and understory plants along with invasives. Any NNI removal could have been done by hand, not chainsaws and heavy equipment. This is a bogus attempt to justify the project.**

- "This NNI removal will enable future trees to thrive without competing for resources."
    - **THIS IS DISINFORMATION. The county has admitted, and we have seen, that it cannot control the growth of NNIs post-stream "restoration" construction. This can be seen at any county stream "restoration" project such as the one at Falls Reach. These projects disturb large swathes of soil which is a major cause of invasive plant spread.**
    - **A 10/18/2021 Montgomery County DEP fact sheet about their Falls Reach, Potomac stream "restoration" states "Vegetative cover in the stream riparian area has successfully been reestablished…." However, a site visit on 10/24/2023 showed that four and a half years after project completion in March 2019, the forest floor was overrun with the non-native invasives Japanese Stiltgrass (Microstegium vimineum) and Hairy Jointgrass (Arathroxon hispidus).**

- "Over time, vegetation around a stream restoration project returns, trees grow, and animal/aquatic life abound again."
    - **This is GREENWASHING nonsense. DC-area botanist John Parrish (formerly with the National Park Service Center for Urban Ecology, past vice president of the Maryland Native Plant Society, currently serving on the Boards of Conservation Montgomery**

and the Friends of Ten Mile Creek) has said that after the loss of long-established forest soils, structure and biodiversity, "It will take 100 years or more for a forest to develop soils and structure capable of sustaining a full complement of native plants and animals."
Plus, a City of Toronto study titled "Every Tree Counts"[51] compared the environmental performance of a 75 cm (30 inch) diameter tree to a 15 cm (6 inch) diameter tree. "A 75cm tree in Toronto intercepts ten times more air pollution, can store up to 90 times more carbon and contributes up to 100 times more leaf area to the City's tree canopy than a 15cm tree…. A 75cm tree in Toronto intercepts ten times more air pollution, can store up to 90 times more carbon and contributes up to 100 times more leaf area to the City's tree canopy than a 15cm tree."

The article "Why Investing in Mature Tree Growth is Beneficial for Cities: A Financial and Environmental Case"[52] describes more ways in which mature trees offer advantages over newly planted trees. Mature trees are some of our best tools for combatting the impacts of climate change.
The title of a Bay Journal article from October 2025 by Timothy Wheeler is "Forests, urban tree canopy still shrinking in Bay region." Both DEP and Montgomery Parks have contributed to this situation by allowing engineered stream "restorations" such as the Glenallan project which clearcut riparian forests.

- "This [stream] erosion causes many problems such as…exposure of sanitary sewers running within the stream bed (a public health concern)…."
    - **This is fearmongering by DEP which purposely conflates sewer line protection projects with the purpose of a stream "restoration." Targeted spot hardening of sewer lines in the immediate area of the problem can fix this, unlike the hundreds or thousands of feet of some stream "restorations."**

- "Focusing our efforts solely on upland green infrastructure cannot fix the problems in our streams."
    - **This is easily disproved DISINFORMATION. The published science shows that stream "restorations" do not work. The *only* solution is upland (out-of-stream) projects that control stormwater runoff at its source (from roads, parking lots, roofs, etc.) with bioretentions, permeable pavement, rain gardens and many other practices. In the past, DEP has referenced papers to incorrectly conclude that upland green infrastructure cannot stop stream erosion. However, the proper conclusion from those papers is simply that *not enough* upland projects were done to keep stormwater from firehosing into streams.**

[51] "Every Tree Counts A Portrait of Toronto's Urban Forest," City of Toronto Parks, Forestry & Recreation, Urban Forestry https://www.itreetools.org/documents/349/Toronto_Every_Tree_Counts.pdf
[52] https://www.deeproot.com/blog/blog-entries/why-investing-in-mature-tree-growth-is-beneficial-for-cities-a-financial-and-environmental-case/

- "We have many highly developed areas in the county and finding locations for green infrastructure in these areas sufficient in size and expanse is challenging with numerous constraints."
    - **THIS IS MISLEADING: First, DEP does not even do these types of alternative analyses for every proposed stream "restoration" project. For example, DEP never did an upland alternative analysis for the Falls Reach project or the scheduled Grosvenor stream "restoration." Second, DEP has never proven, because it can't, that the county's MS4 permit cannot be met unless stream "restorations" are done. DEP's rational for stream "restorations," aside from their false claims about stream "restoration" benefits, is that it is more convenient to sacrifice our natural areas to stream construction projects than to take on the "challenge" of controlling stormwater outside of streams. What is particularly egregious is that Maryland Department of the Environment (MDE) has statewide data from its 2022 Annual Report on Financial Assurance Plans (FAPs) showing there are 20 non-destructive, out-of-stream stormwater project types that are more cost effective than stream "restorations." This waste may be of interest to the Montgomery County Office of the Inspector General whose website (https://www.montgomerycountymd.gov/oig/hotline.html) defines waste as "The careless expenditure of county funds or resources above and beyond the level that is reasonably required to meet the needs of the county…." They give examples include buying excessive goods or services and inefficient use of resources.**

- "We know that stream restoration is beneficial for habitat improvements, to protect private property and utility infrastructure, and to reduce in-stream erosion and sedimentation."
    - **THIS IS DISINFORMATION. DEP chooses to ignore the science, observations of their washed out projects, and common sense. The published science and ground observations conclude that these projects do not work to either stabilize streams, improve water quality, or improve ecological function. DEP has never provided any published science to support their false claims about the benefits of stream "restorations." DEP continues to falsely conflate utility infrastructure (e.g. sewer line) protection projects with the definition of a stream "restoration" to justify their projects.**

Conclusion

Just as the Chesapeake Bay has environmental value, so do the rich fauna and flora of our local stream valleys. There are better ways to protect the Bay via an MS4 permit than by using so-called "stream restorations" to destroy existing streams and streamside forests and replacing them with engineered stormwater conveyances. Rather than funding completely avoidable and destructive stream "restorations," funding should only go to out-of- stream practices that do not destroy our natural resources.

Stream "restorations" do not meet the requirements of the Water Quality Revolving Loan Fund Program since 1) they are not "green" projects, 2) they do not "further the water quality and public health objectives of the CWA," 3) they have no "cost efficiency," 4) they have no "sustainability," and 5) they lack co-benefits as required in the "MARYLAND WATER INFRASTRUCTURE FINANCING ADMINISTRATION

WATER QUALITY REVOLVING LOAN FUND PROGRAM FEDERAL FISCAL YEAR 2026 FINAL INTENDED USE PLAN July 2026"[53]

Based on the above information, the $25M Montgomery County MS4 Permit - Water Quality Improvement Project in TABLE 1: WQSRF FFY 2026 IUP PROJECT FUNDING LIST (#1 Draft Water Quality IUP Table 1[54]) should be denied funding. The County should reapply for funding without stream "restorations" as part of their mix of practices to meet MS4 Permit requirements.

Thank you for considering our input.

Sincerely,

Kenneth Bawer
Coalition to Stop Stream Destruction

[53] https://mde.maryland.gov/programs/water/WQFA/Documents/%233_MD%20WQ%20SRF%20FFY26%20IUP%20Narrative_21Jul2026.pdf
[54] https://mde.maryland.gov/programs/water/WQFA/Documents/%231_WQ%20SRF%20FFY2026%20IUP%20Table%201_21Jul2026.pdf

APPENDIX 1: Stream "restorations" cost more than other practices

Maryland Department of the Environment (MDE) has statewide data from the 2022 Annual Report on Financial Assurance Plans (FAPs)[55] showing there are twenty non-destructive, out-of-stream project types that are more cost effective per acre than so-called stream "restorations":

	Cost per Acre
Stream Restoration	$32,138
LOWER CONSTRUCTION COST THAN SR PER 2022 MDE FAP	
1.Green Roof, Extensive	$14,287
2.Rainwater Harvesting	$15,767
3.Dry Well	$24,951
4.Shallow Wetland	$25,056
5.Pocket Wetland	$6,236
6.Surface Sand Filter	$14,877
7.Dry Swale	$18,342
8.Other	$30,962
9.Redevelopment	$569
10. Forestation on Pervious Urban	$7,644
11. Riparian Forest Planting	$31,374
12. Urban Tree Canopy	$6,327
13. Septic Denitrification	$564
14. Septic Connections to WWTP	$114
15. Shoreline Management	$6,694
16. Catch Basin Cleaning	$22,210
17. Mechanical Street Sweeping	$7,376
18. Regenerative/Vacuum Street Sweeping	$7,372
19. Nutrient Credits [Trading]	$30
20. Septic Pumping	$1,140

What should really be compared are lifecycle cost (a.k.a., Total Cost of Ownership) = (cost of construction + maintenance + repair), but MDE said that "The law does not require life-cycle costs of BMPs."[56]

[55] 2022 Annual Report on Financial Assurance Plans (FAPs): https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Documents/FAP-WPRP/2022%20Stormwater%20Financial%20Assurance%20Plan%20Annual%20Report%20to%20Governor_%20MSAR%20%23%2010954%2010.18.2022.pdf

[56] Email from MDE to K. Bawer on 8/10/2023.

APPENDIX 2: Limit Engineered Stream "Restorations" Fact Sheet

(Coalition to Stop Stream Destruction, 5/18/2026, v.151)

1. WHAT?. They are civil engineering projects that **destroy natural areas,** converting streams into engineered stormwater conveyances using heavy equipment to clearcut forests, dig artificial channel shapes, and dump fill material into streams. Use the QR code to **see videos** of these harmful engineered stream projects which should be held to the same "do no harm" principle as in healthcare since both involve living systems.

2. WHERE? Usually in public land like parks that do not require public approval and are hidden from street view.

3. WHY? Engineered stream "restorations" try but **fail to stop stream erosion** or improve water quality or stream ecology**. Their unattainable goal - to recreate "natural" or "historical" pre-colonial conditions - is impossible given today's land use & climate.[i] Governments hide the real drivers of engineered steam "restorations" - not environmental concern, but EPA regulations (MS4 permit & TMDL goals) and construction "mitigation" laws[ii]. Despite industry & government disinformation[iii], "restorations" are not required by law. There are many nondestructive out-of-stream alternatives (see #6).[iv]

**** ROOT CAUSE OF STREAM EROSION?** Upland (out-of-stream) stormwater runoff from impervious surfaces like roads, parking lots, etc. that firehoses into steams. Engineered stream "restorations" **don't address this root cause of erosion**.

4. WHO INITIATES? Local or state governments for pollution laws; private companies for construction "mitigation."

5. HOW SOLD TO THE PUBLIC? Greenwashing & disinformation[v] to the public and elected officials are used to claim stream "restorations" are both necessary and desirable. Click for a **presentation** or use QR code:

a. Local, state, and federal governments and the $25B industry **ignore the science** and Chesapeake Bay Program Report[vi] that stream "restorations" do not stop erosion. Published papers[vii] analyzed over 700 "restorations" to show that water quality and ecological function are not improved (even though "…biological benefit is an assumed condition for the permitting and crediting of stream restoration projects"[viii]), are sometimes worse, and less than half stopped stream erosion – less than a coin toss. A few claims of "successful" projects (if they even exist) are outliers.

b. Proponents **falsely claim** that 1) studies[ix, x, xi] prove upland projects cannot stop stream erosion – in fact, these studies only show that too few properly sized projects were built, and 2) there are not enough upland areas for stormwater control, even when not evaluated or only considering the same watershed or meets-minimum projects done in public areas/ROWs.

c. Proponents **ignore or trivialize adverse consequences**[xii] by hiding tree numbers cut, claiming that wildlife habitat loss by forest clearcutting is temporary and quickly mitigated by planting saplings,[xiii] that invasives will be removed and then successfully controlled, concealing that small animals will be crushed or buried alive, and hiding the loss of property values due to viewshed destruction, increased traffic noise, and decreased shade, privacy, and nature-based recreation.

d. They **hide negative consequences** from floodplain reconnection[xiv] "restorations" like more flooding due to runoff from more frequently saturated floodplains and loss of evapotranspiration from cut trees, death of trees due to water-logged soil, more mosquitoes, and deposition into floodplains of toxins in stormwater that are hazardous to animals and children.

e. Governments falsely claim that **photos of washed-out engineered "restorations"**[xv] that failed to stabilize streams and that require costly taxpayer-funded repairs[xvi,xvii] are cherry-picked, yet they provide no scientific evidence to the contrary.

f. To justify "restorations," they claim stream erosion rates using bogus theoretical, irreproducible calculations[xviii].

g. To promote "restorations," governments falsely conflate the need for infrastructure and property protection (e.g., exposed sewer lines and backyard erosion) which can be done via spot repairs without the need for stream "restorations."[xix]

h. Governments[xx] & Chesapeake Bay Program's STAC[xxi] make baseless claims that engineered "restorations" are cheaper (install + life cycle cost) than 20 less expensive out-of-stream stormwater control practices per MD Dept. of Environment.[xxii]

6. SOLUTION? Control stormwater outside of streams with **non-destructive, upland practices** such as roadside bioretentions, rain gardens, permeable pavement, etc.[xxiii] in already disturbed, developed areas. Many are cheaper than engineered stream "restorations" and provide co-benefits like reducing urban flooding and heat islands, providing green spaces, increasing property values, and protecting streams & floodplains from toxins in stormwater.

7. COST vs. NATURE? Even if some upland stormwater controls are more expensive, **our natural areas must be protected**.[xxiv]

8. HOW TO FIX ERODED STREAM BANKS? Streams self-heal[xxv] and self-stabilize once upland runoff is controlled.[xxvi]

9. OUR ASK: Stop engineered stream "restorations" from getting MS4 permit, TMDL,

[i] Just as the Chesapeake Bay Program's "Comprehensive Evaluation of System Response" (CESR) report states that "The Bay of the future will be different from the Bay of the past because of permanent and ongoing changes in land use, climate change, population growth, and economic development," so too it will be impossible to restore local streams to "natural" or "historical" pre-colonial conditions.

[ii] MS4 permits for stormwater runoff pollution control and mitigation projects to offset damage done e.g. by proposed Beltway widening.

[iii] "Why is this work required?" in "FAQs, Miracle Drive," by Montgomery Co. DEP. https://greenmiracledrive.com/wp-content/uploads/2023/05/Miracle-Drive-FAQ_0526.pdf

[iv] Allowed MS4 permit practices in Maryland are listed in the MDE Accounting Guidance document: https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Documents/Final%20Determination%20Dox%20N5%202021/MS4%20Accounting%20Guidance%20FINAL%2011%2005%202021.pdf

[v] Presentations by governments and industry falsely promise stream & ecological restoration and water quality improvement. But, in a private meeting for Stormwater Partners (1/16/2024), Montgomery Co. DEP admitted that "We have not seen benthic [macroinvertebrate] improvement in any of our stream restorations." BMIs are a measure of stream health.

[vi] In their Step 3: Estimate restoration reduction efficiency, The Chesapeake Bay Program's (CBP) Expert Panel Report states that, "In the last step, sediment and nutrient load reductions are conservatively reduced by 50% to account for the presumed [in]efficiency of stream restoration practices." https://chesapeakestormwater.net/wp-content/uploads/2022/07/9928-1.pdf.

[vii] Palmer, M. A., K. L. Hondula, and B. J. Koch, University of MD, 2014, "Ecological Restoration of Streams and Rivers: Shifting Strategies and Shifting Goals,", Annu. Rev. Ecol. Evol. Syst. 2014. 45:247-269. (https://akottkam.github.io/publications/Palmerpublications/Palmer2014a.pdf); Hilderbrand, Robert H., et. al.,2020, "Quantifying the ecological uplift and effectiveness of differing stream restoration approaches in Maryland," Final Report Submitted to the Chesapeake Bay Trust for Grant #13141, (https://cbtrust.org/wp-content/uploads/Hilderbrand-et-al_Quantifying-the-Ecological-Uplift.pdf; Southerland, M., et. al., 2021, "Vertebrate Community Response to Regenerative Stream Conveyance Restoration as a Resource Trade-Off," CBT Research Grant; https://cbtrust.org/wp-content/uploads/FINAL-Report-for-18002-Tetra-Tech-CBL-CBT-RR-Vertebrates-in-RSCs-30SEP2021-Submitted-to-CBT.pdf; Carr, J., Hart, D., McNair, J., 2006, "Compilation and Evaluation of Stream Restoration Projects: Learning from Past Projects to Improve Future Success," Drexel Univ., Submitted to Penn Foundation. https://ansp.org/research/environmental-research/projects/restoration/

[viii] Chesapeake Bay Program's (CBP), STAC Workshop Report, 2024, "The State of the Science and Practice of Stream Restoration," https://www.chesapeakebay.net/files/STAC-Report_Stream-Restoration_24-006-1.pdf; objective of Clean Water Act is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." https://www.govinfo.gov/content/pkg/USCODE-2018-title33/pdf/USCODE-2018-title33-chap26.pdf

[ix] Williams, B. et al., (2022), "Tracking geomorphic changes after suburban development with a high density of green stormwater infrastructure practices in Montgomery County, Maryland," Geomorphology. https://doi.org/10.1016/j.geomorph.2022.108399

[x] Thompson, T. W. et al., (2023) "Effectiveness of stormwater management practices in protecting stream channel stability," presented at the 2023 Maryland Water Monitoring Council Annual Conference. https://drive.google.com/file/d/1isYAs58zVsLJ9H1VOiu4PvzMuYvSplf3/view

[xi] Hopkins, Kristina G., et. al., 2022, "Lessons learned from 20 y of monitoring suburban development with distributed stormwater management in Clarksburg, MD," Freshwater Science, volume 41, number 3, Sept.2022. https://www.journals.uchicago.edu/doi/full/10.1086/719360

[xii] References provided on request.

[xiii] "Restoration" disturbances are not temporary. After clear-cutting, "…full ecological recovery, including soil stabilization and biodiversity restoration, can take several decades to over a century." https://forestry.com/education-and-community/educational-resources/clear-cutting-pros-and-cons-what-you-need-to-know/

[xiv]The floodplain reconnection techniques of "restoration" try to re-create pre-colonial conditions when stormwater more frequently overflowed stream banks and spread into a floodplain where eroded sediment is deposited. In the "Legacy Sediment Removal" method, the stream valley is clearcut then tons of soil are removed to lower the valley to the stream level. In the FILL method, material is dumped into a stream channel to raise its level closer to the valley floor (only to be eroded out again by uncontrolled stormwater runoff.)

[xv] Photos in Appendix 3, testimony on Montgomery Co. FY26 Capital Budget; MoCo DEP and Parks have no public list of storm intensity each project has experienced and which were damaged. https://drive.google.com/file/d/1DTOOLLm_Aei8lRpPoxPpnFvnTXWJW8eq/view?usp=drive_link

[xvi] Example of Montgomery Co. failed "restorations" repair cost per DEP: Lower Booze Creek, Potomac: repair = $3.6M.

[xvii] A CBP memo acknowledges that stream "restorations" are subject to catastrophic damage. https://chesapeakestormwater.org/wp-content/uploads/2022/07/9621-1.pdf The standard industry guarantee is only one year since they know these projects will be washed out.

[xviii] Per CBP Expert Panel Report, theoretical erosion rate calculations have "…high variability when performed by different practitioners," and "restorations" are presumed to be at most 50% effective in stopping erosion. https://chesapeakestormwater.net/wp-content/uploads/2022/07/9928-1.pdf

[xix] False conflation: "What is stream restoration? What problem can it solve? …Erosion can also be harmful to public infrastructure (such as exposing a sewer pipe) and private property (such as a backyard in danger of eroding away into a stream). https://www.montgomerycountymd.gov/DEP/water/clean-water-montgomery/watershed/stream-restoration.html

[xx] Montgomery Co DEP claims "restorations" are cheaper than upland stormwater control practices (WQAG meeting, 4/12/2021). They misleadingly compare pricing for stream "restorations" vs. DEP's "Green Streets" program comprised of at least 7 different practices including Rain Gardens, Bioretentions, etc. DEP does not break out prices for these 7 practices for a true comparison of practices.

[xxi] CBP STAC Workshop Report, 2024, "State of the Science and Practice of Stream Restoration," p.47 https://www.chesapeakebay.net/files/STAC-Report_Stream-Restoration_24-006-1.pdf

[xxii]Per MD Dept. of the Environment (MDE) "Annual Report on Financial Assurance Plans" -2022- https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Documents/FAP-WPRP/2022%20Stormwater%20Financial%20Assurance%20Plan%20Annual%20Report%20to%20Governor_%20MSAR%20%23%2010954%2010.18.2022.pdf

[xxiii] Examples at MoCo DEP's site https://www.montgomerycountymd.gov/DEP/water/clean-water-montgomery/watershed/green-streets.html

[xxiv] Especially given global warming and some Climate Action Plans' goal to "Retain, increase, and restore terrestrial ecosystems including forests…." https://www.montgomerycountymd.gov/climate/Resources/Files/climate/climate-action-plan.pdf

[xxv] Prestegaard, K. 2023, "Urban Runoff and Channelization," STAC Workshop Report, 2023, "The State of the Science and Practice of Stream Restoration, https://www.chesapeake.org/stac/wp-content/uploads/2023/04/Prestegaard-Karen-panel-slides-2.pdf

[xxvi] Fraley-McNeal, et. al. (2021), "The Self-Recovery of Stream Channel Stability in Urban Watersheds due to BMP Implementation," https://cbtrust.org/wp-content/uploads/Self_Recovery_of_Stream_Channel_Stability_Final_Draft_03-23-21.pdf; streambank soil will slough off into streams during self-stabilization, but the science (note vi) shows that most stream "restorations" do not stabilize streams anyway, and photographic evidence shows that "restorations" are being eroded away by post-construction storms.

Draft Response to Public Comments Regarding Stream Restoration Funding and Implementation

The Maryland Department of the Environment (MDE) maintains that stream restoration is a recognized, science-based approach that provides necessary water quality and ecological benefits. While some comments allege that stream restorations do not improve water quality and fail to meet the objectives of the Clean Water Act, the U.S. EPA Chesapeake Bay Program (CBP) and the State of Maryland recognize their necessity for addressing legacy degradation. The Phase 6 Chesapeake Bay Watershed Model estimates a substantial annual export of nitrogen, phosphorus, and sediment from eroded stream beds and banks into the tidal waters of the Chesapeake Bay. By stabilizing streambeds, reconnecting floodplains, and enhancing surface and groundwater interactions, stream restoration significantly reduces the nutrient and sediment loads being delivered downstream.

Furthermore, MDE does not allow stream restoration projects unless there is clear evidence of degradation, such as incised channels, eroded banks, or disconnected floodplains. Projects are evaluated and permitted with the specific intent to provide overall ecological uplift to a system. Recent scientific literature supports these outcomes. For example, recent findings by the Chesapeake Bay Program's Science and Technical Advisory Committee (STAC)[1] demonstrate that stream-restoration practices significantly reduce streambank erosion, enhance floodplain deposition, and yield verifiable nitrogen, phosphorus, and sediment load reductions.

Concerns regarding the destructive nature of construction,such as tree removal, loss of riparian habitat, and that these are not "green" projects, fail to account for the holistic evaluation and strict regulatory oversight governing these projects by the nontidal wetlands regulations (COMAR 26.23) and waterway construction regulations (COMAR 26.17.04). MDE reviews all stream restoration projects and requires documentation demonstrating that restoration is proposed due to functional impairment of the biology and geomorphology of current stream conditions.The review process includes close coordination with the Army Corps of Engineers, EPA, the U.S. Fish and Wildlife Service, and Maryland's Department of Natural Resources (DNR). While existing vegetation may need to be removed to reshape incised stream banks and reconnect floodplains, monitoring has shown these ecological communities to be resilient, establishing new, healthy species relatively quickly in the reconnected floodplain.

These projects are heavily regulated and subject to local erosion and sediment control plan review and approval requirements, and forest conservation act requirements. To aid in the transition, planting plans are often requirements of MDE permits and often compelled by compliance with the Forest Conservation Act at the state and local levels. Further stewardship

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[1] Noe, G., N. Law, J. Berg, S. S. Filoso, Drescher, L. Fraley-McNeal, B. Hayes, P. Mayer, C. Ruck, B. Stack, R. Starr, S. Stranko, and T. Thompson. 2024. *The State of the Science and Practice of Stream Restoration in the Chesapeake: Lessons Learned to Inform Better Implementation, Assessment and Outcomes.* STAC Publication Number 24-005, Edgewater, MD. 90 pp. Available at: https://www.chesapeake.org/stac/events/the-state-of-the-science-and-practice-of-stream-restoration-in-the-chesapeake-lessons-learned-to-inform-better-implementation-assessment-and-outcomes/

for forest management can be incorporated into a project by engaging Maryland Department of Natural Resource's Forest Conservation and Management Program. MDE also enforces oversight through construction inspections by local jurisdictions and the Department. Additionally, the Whole Watershed Act, passed during the 2024 Legislative Session, establishes minimum criteria for the monitoring associated with each stream restoration project. *See, e.g.,* Title 18 of the Environment Article, Annotated Code of Maryland. Upon project completion, at least five years of monitoring in accordance with the design and permit are required. This monitoring includes assessments of stream stability, floodplain function, and vegetation viability to ensure that restoration goals are met. The Whole Watershed Act also requires expanded public notification requirements and the frequency of public meetings for stream and floodplain restoration projects during the design process. This process allows for citizen concerns associated with local projects to be addressed and considered prior to construction.

Commenters state that alternative practices like stream restoration provide little stormwater runoff volume reduction, lack co-benefits, and have no cost efficiency. However, stream restoration is often an effective and necessary tool to address stormwater infrastructure maintenance and mitigate local flooding. Stream restoration often reconnects degraded channels to floodplains, providing critical floodplain storage and treatment, which increases the ability of natural systems to convey stormwater runoff safely.

The credits generated by stream restoration for MS4 permits and TMDL goals are firmly rooted in scientific consensus. The 2021 Accounting Guidance outlines a process for determining credits consistent with the Chesapeake Bay Program (CBP) expert panel recommendations and reports (Burch, J et al. 32 2019, Wood, D. & Schueler, T. 2020) and associated qualifying criteria for BMP implementation. The CBP expert panel process includes a thorough literature review of the latest science associated with stream restoration, and the panel's conclusions are based on the consensus of all members. The stream restoration protocols are not only used in Maryland, but in other Bay states participating in the CBP partnership, including Delaware, Pennsylvania, Virginia, and West Virginia.

Stream restoration protocols and credits are based on science and independent experts in the field, and reducing or eliminating the stream restoration credit is not the function of this funding award process to decide. It is noted that credits achieved through stream restoration, are consistent with the recommendations of the CBP expert panels and provide permittees the necessary flexibility to determine the most effective Best Management Practices (BMPs) to address local impairments, optimize benefits to constituents, and improve water quality. A MS-4 Permittee that seek credits for stream restoration project perform inspections using the CBP's *Recommended Methods to Verify Stream Restoration Practices Built for Pollutant Crediting in the Chesapeake Bay Watershed* (Burch, J. et al. 2019) to verify the projects are functioning as designed. Stream restorations that fail an inspection as documented through MS4 Geodatabase annual reporting will not receive credit in accordance with CBP recommendations. When proper maintenance and any necessary remediation is restored, the credit may be reapplied.

Claims that these projects lack scientific backing or fail to achieve ecological goals are not supported by the robust scientific consensus, MDE data, or the Chesapeake Bay Program's expert evaluations.

Maryland

MDE WQFA_Announcement <mde.wqfa_announcement@maryland.gov>

Comment for FY26 Clean Water Project Priority List

Marilyn Williams <Finance> <mwilliams@dorchestermd.gov> Fri, Aug 7, 2026 at 11:51 AM
To: MDE Water Quality Financing Administration Announcement -MDE- <mde.wqfa_announcement@maryland.gov>

We are in receipt of the FY2026 Clean Water Project Priority List and note one typographical error pertaining to the project ranked #47 - Dorchester County Jenkins Creek Pump Station Repairs/Replacements (CW0057). The cost of the project is $64,963, however it is listed as $6,496,269 under "Total Project Cost". Please revise this item to reflect the correct project cost. Thank you!

Marilyn B. Williams, CFM
Grant Writer
Dorchester County Finance Dept.
501 Court Lane, Room 102
P.O. Box 66
Cambridge, MD 21613
410-228-7291

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MDE WQFA_Announcement <mde.wqfa_announcement@maryland.gov>

Extended public comment period: FFY 2026 WQ & DW IUPs/revised PPLs

Robert J. Duma <rjd@dbfinc.com> Thu, Aug 27, 2026 at 3:33 PM
To: MDE Water Quality Financing Administration Announcement -MDE- <mde.wqfa_announcement@maryland.gov>
Cc: "Joseph Mangini, Jr." <jmangini@pittsvillemd.gov>

Good afternoon,

On behalf of the Town of Pittsville, we would like to submit the following question regarding the Pittsville WWTP Upgrade & Septic Elimination Project:

The Town of Pittsville and Wicomico County take exception to the comment, “W/S + PFA Issue”. The project as presented, is within the Town of Pittsville PFA, the Parsonsburg Rural Village, and two (2) areas with PFA Exception Letters from the Health Department. The forcemain connecting the two areas would be a denied access forcemain and would not allow anyone outside of the PFAs to connect. The Town of Pittsville and Wicomico County would like to further discuss these issues with MDE.

Thanks,

Rob

Robert J. Duma, P.E.

Associate | Senior Civil Engineer
Department of Municipal Public Works

Davis, Bowen & Friedel, Inc.

Office: 410-543-9091 | Fax: 410-543-4172

From: garon.lizana@maryland.gov <garon.lizana@maryland.gov> **On Behalf Of** MDE WQFA_Announcement
Sent: Friday, August 7, 2026 11:36 AM
Cc: Garon Lizana -MDE- <garon.lizana@maryland.gov>
Subject: Extended public comment period: FFY 2026 WQ & DW IUPs/revised PPLs

Good morning,

[Quoted text hidden]

APPENDIX D

Assistant Attorney General Certification

State Fiscal Year 2026
(July 1, 2025 – June 30, 2026)

Maryland Department of Environment
Maryland Water Infrastructure Financing Administration
Final Federal Fiscal Year 2026 Intended Use Plan
Maryland Clean Water State Revolving Fund

The document is attached separately.