

**UA01**  
**Department of the Environment – Capital**

***Capital Budget Summary***

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**Grant and Loan *Capital Improvement Program***  
**(\$ in Millions)**

<b>Program</b>	<b>FY 2018 Approp.</b>	<b>FY 2019 Approp.</b>	<b>FY 2020 Estimate</b>	<b>FY 2021 Estimate</b>	<b>FY 2022 Estimate</b>	<b>FY 2023 Estimate</b>	<b>FY 2024 Estimate</b>
Maryland Water Quality Revolving Loan Fund	\$336.792	\$306.600	\$127.657	\$126.800	\$126.800	\$126.800	\$126.800
Maryland Drinking Water Revolving Loan Fund	129.003	32.830	32.000	32.000	32.000	32.000	32.000
Bay Restoration Fund – Wastewater Projects	120.000	70.000	70.000	75.000	75.000	80.000	80.000
Septic System Upgrade Program	15.000	15.000	15.000	15.000	15.000	15.000	15.000
Water Supply Financial Assistance Program	1.944	3.303	1.960	2.500	2.500	2.500	2.500
Hazardous Substance Clean-Up Program	0.500	0.500	0.525	1.000	1.000	1.000	1.000
Mining Remediation Program	0.500	0.500	0.500	0.500	0.500	0.500	0.500
Energy-Water Infrastructure Program	8.000	8.000	0.000	0.000	0.000	0.000	0.000
Comprehensive Flood Management Program	0.000	0.000	5.000	0.000	0.000	0.000	0.000
<b>Total</b>	<b>\$611.739</b>	<b>\$436.733</b>	<b>\$252.642</b>	<b>\$252.800</b>	<b>\$252.800</b>	<b>\$257.800</b>	<b>\$257.800</b>

Note: Numbers may not sum to total due to rounding.

For further information contact: Andrew D. Gray

Phone: (410) 946-5530

*UA01 – Department of the Environment – Capital*

<b>Fund Source</b>	<b>FY 2018 Approp.</b>	<b>FY 2019 Approp.</b>	<b>FY 2020 Estimate</b>	<b>FY 2021 Estimate</b>	<b>FY 2022 Estimate</b>	<b>FY 2023 Estimate</b>	<b>FY 2024 Estimate</b>
PAYGO GF	\$0.500	\$0.500	\$0.525	\$1.000	\$1.000	\$1.000	\$1.000
PAYGO SF	187.101	220.280	177.745	183.889	183.889	188.889	188.889
PAYGO FF	42.614	43.300	52.861	53.041	53.041	53.041	53.041
GO Bonds	21.524	22.653	21.511	14.870	14.870	14.870	14.870
Revenue Bonds	360.000	150.000	0.000	0.000	0.000	0.000	0.000
<b>Total</b>	<b>\$611.739</b>	<b>\$436.733</b>	<b>\$252.642</b>	<b>\$252.800</b>	<b>\$252.800</b>	<b>\$257.800</b>	<b>\$257.800</b>

FF: federal funds  
GF: general funds  
GO: general obligation  
PAYGO: pay-as-you-go  
SF: special funds

## ***Key Observations***

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- ***Marylanders Served by Public Water Systems in Significant Compliance Decreases:*** Between fiscal 2017 and 2018, there was a decrease in the percent of Marylanders served by systems that are in compliance with all drinking water regulations for which the department has primacy. This is due to the occurrence of violations at several large water systems that serve over 10,000 persons. Fortunately, the violations are for monitoring and reporting and considered technical and not a public health concern.

## ***Summary of Recommended PAYGO Actions***

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- |  | <u><b>Funds</b></u> |
|--|---------------------|
| 1. Hazardous Substance Clean-up Program – Capital Appropriation                        | \$110,000 GF        |
| Reduce the appropriation for the Hazardous Substance Clean-Up Program.                 |                     |
| 2. Concur with Governor's allowance for the Water Quality Revolving Loan Fund.         |                     |
| 3. Concur with Governor's allowance for the Drinking Water Revolving Loan Fund.        |                     |
| 4. Concur with Governor's allowance for the Bay Restoration Fund – Wastewater program. |                     |

5. Concur with Governor's allowance for the Bay Restoration Fund – Septic Systems program.

**Total PAYGO Reductions**

**\$110,000**

### ***Summary of Recommended Bond Actions***

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**Funds**

1. Comprehensive Flood Mitigation Program

Approve the \$5,000,000 general obligation bond authorization for the Comprehensive Flood Mitigation Program.

2. Maryland Drinking Water Revolving Loan Program

Approve the \$5,287,000 general obligation bond authorization for the Drinking Water Revolving Loan Fund.

3. Maryland Water Quality Revolving Loan Fund

Approve the \$8,764,000 general obligation bond authorization for the Water Quality Revolving Loan Fund.

4. Mining Remediation Program

Approve the \$500,000 general obligation bond authorization for the Mining Remediation Program.

5. Water Supply Financial Assistance Program

-\$792,462 GO

Strike the language and reduce funding for the Water Supply Financial Assistance Program.

**Total General Obligation Reductions/Additions**

**-\$792,462**

## ***Summary of Updates***

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### **Status of Consent Decrees**

Eight Maryland jurisdictions have consent decrees for various water quality violations. Overall, the Maryland Department of the Environment's (MDE) fiscal 2020 allowance includes \$44.3 million in order to address the consent decrees.

## ***Program Description***

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MDE's capital program is comprised of the Water Quality Revolving Loan Fund (WQRLF), the Drinking Water Revolving Loan Fund (DWRLF), the Bay Restoration Fund (BRF) – Wastewater Projects, BRF – Septic System Projects, the Water Supply Financial Assistance Program, the Hazardous Substance Clean-Up Program, the Mining Remediation Program, and the addition of a new program, the Comprehensive Flood Management Program. The Biological Nutrient Removal (BNR) Program has been folded into the BRF – Wastewater Projects, and the Energy-Water Infrastructure Program received final funding in fiscal 2019. The programs in MDE's fiscal 2020 allowance address MDE's goals of protecting water resources and ensuring safe and adequate supplies of drinking water, managing air quality and emissions for maximum protection of human health and the environment, and reducing Maryland citizens' exposure to hazards. Descriptions of MDE's eight current programs follow.

- **WQRLF:** The WQRLF was created to provide low-interest loans to counties and municipalities to finance water quality improvement projects. The fund was established by the federal government in the Clean Water Act of 1987 and by the State in Sections 9-204 and 9-1604 of the Environment Article to replace the federal construction grants program that was phased out. Projects eligible for funding include wastewater treatment plants (WWTP); failing septic systems; and nonpoint source projects, such as urban stormwater control projects. The federal Act requires a 20% State match. For fiscal 2020, at least 10% of the federal funding must be used for green reserve projects – water efficiency, energy efficiency, and stormwater projects – and no more than \$15.528 million may be used for loan forgiveness and/or grants. WQRLF projects are prioritized based on an Environmental Protection Agency (EPA)-approved Integrated Project Priority System. The priority system for WQRLF projects consists of a system for evaluating, rating, and ranking of both point source and nonpoint source water quality projects. The Integrated Project Priority System originally was revised by MDE and approved by EPA in 2010 to target financial assistance to projects that help meet Maryland's Phase I Watershed Improvement Plan (WIP) to address the Chesapeake Bay Total Maximum Daily Load (TMDL). The most recent revision was approved by EPA on November 10, 2016. The Integrated Project Priority System focuses on water quality or public health benefits, compliance, cost efficiency, and sustainability; the most recent revision weights cost efficiency more heavily than it was previously weighted, among other changes. In accordance with this system, the projects are rated and ranked by MDE's Water Quality Financing Administration

and are listed in ascending ranking order on the Project Priority List. Through January 1, 2019, the program has executed \$2.653 billion in loans, loan forgiveness, and grants.

- **DWRLF:** The DWRLF was established in accordance with a federal capitalization grant approved by the U.S. Congress in 1996 in anticipation of future federal capitalization grants. This program was authorized by the General Assembly to provide loans to counties and municipalities to finance water supply improvements and upgrades. In accordance with the federal law, these funds may also be loaned to private parties. The federal Act requires that a minimum of 20% of State matching funds for each year's federal capitalization grant be deposited into the fund. For fiscal 2020, at least 20% and no more than 50% of the federal funding must be used for loan forgiveness or grants. Similar to the WQRLF, DWRLF projects are prioritized based on an EPA-approved Drinking Water Project Priority System that focuses on many criteria, the most important being the public health benefit. Through January 1, 2019, the program has executed approximately \$523.8 million in loans, loan forgiveness, and grants.
- **BRF – Wastewater Projects:** The BRF (Chapter 428 of 2004) was created to address the significant decline in Chesapeake Bay water quality due to overenrichment of nutrients, such as phosphorus and nitrogen. This dedicated fund, financed in large part by WWTP users, initially was used to provide grants to local governments to upgrade Maryland's 67 major WWTPs with enhanced nutrient removal (ENR) technology as part of reducing an additional 7.5 million pounds of nitrogen per year in order to reach Maryland's commitment under TMDL as implemented by WIP. Chapter 150 of 2012 increased the BRF fee beginning July 1, 2012, and made several other changes including establishing additional uses for the fund beginning in fiscal 2018. Chapter 153 of 2015 (Environment – BRF – Use of Funds) added to the authorized uses of the BRF beginning in fiscal 2016, by providing funding for up to 87.5% of the cost of projects relating to combined sewer overflow (CSO) abatement, rehabilitation of existing sewers, and upgrading conveyance systems, including pumping stations; this funding authority previously existed between fiscal 2005 and 2009 and capped at \$5 million annually. The bill also altered the priority of BRF funding beginning in fiscal 2018 by making grants for septic system upgrades, stormwater management, and CSO and sewer abatement projects of equal priority with funding decisions made on a project-specific basis. The funding allocation is up to 100% for eligible capital costs related to planning, design, and construction of ENR technology at targeted WWTPs; up to 87.5% for CSO abatement, rehabilitation of existing sewers and upgrading conveyance systems, including pumping stations; and up to 50% for stormwater project costs. ENR takes wastewater that has gone through the BNR process and further refines the effluent physically, biochemically, or chemically to an average level of 3.0 milligrams per liter (mg/L) nitrogen and 0.3 mg/L phosphorus. Beginning in fiscal 2018, the funding is now being used to upgrade WWTPs to BNR, which biologically removes the total nitrogen to an average level of 8 mg/L and the total phosphorus to an average level of 2 mg/L prior to discharging the water into the receiving waters. Revenue from this fund also supports upgrades to septic systems. A portion of the funding (\$10 million in the fiscal 2020 allowance) is budgeted in the MDE operating budget for operations and maintenance of WWTPs upgraded to ENR status.

- ***BRF – Septic System Projects:*** The BRF includes a separate program to fund the replacement of failing septic systems. This program is funded as part of the BRF legislation by a fee on users of septic systems and sewage holding tanks of which 60% of the revenue is allocated to MDE for the Septic System Upgrade Program and 40% to the Maryland Department of Agriculture for the Cover Crop Program. While Chapter 280 of 2009 (Chesapeake Bay Nitrogen Reduction Act) already required best available technology (BAT) for new and replacement systems in the Chesapeake Bay Critical Area or the Atlantic Coastal Bays Critical Area, new regulations finalized in September 2012 expanded septic system upgrade requirements to include BAT for all septic systems serving new construction in the Chesapeake and Atlantic Coastal Bays watersheds and in the watershed of any nitrogen impaired water body. MDE provides grants to upgrade failing systems and holding tanks with BAT for nitrogen removal. Overall, the program gives priority to projects that involve failing systems in environmentally sensitive areas that are ready to proceed. The program is administered by county governments or other parties; contractors conducting the septic system upgrades are directly reimbursed for their work. Applications are prioritized as follows: (1) failing septic systems or holding tanks in the Critical Areas; (2) failing septic systems or holding tanks outside the Critical Areas; (3) nonconforming septic systems in the Critical Areas; (4) nonconforming septic systems outside of the Critical Areas; (5) other septic systems in the Critical Areas, including new construction; and (6) other septic systems outside the Critical Areas, including new construction. Homeowners with household income less than or equal to \$300,000 per year are eligible for 100% grants of the BAT cost, and all other homeowners are eligible for grants covering 50% of the cost. Nonprofit entities are eligible for 100% grants. For-profit businesses are eligible for 50% grants. Chapter 379 of 2014 (BRF – Authorized Uses – Local Entities) required that up to 10% of the funds in the Septics Account of the BRF be distributed to a local public entity delegated by MDE – local health departments – to cover reasonable costs associated with implementation of MDE regulations pertaining to septic systems that use the BAT for nitrogen removal. MDE adopted a new septic system regulation that became effective on November 24, 2016, which removes the universal requirement that BAT for removal of nitrogen systems be installed outside the Chesapeake and Atlantic Coastal Bays Critical Area for all new construction or replacement septic systems. Chapter 585 of 2018 (On-Site Sewage Disposal System – Watershed Implementation Plan and BRF Disbursements and Financial Assistance) expanded the authorized uses of the BRF Septics Account to include funding for (1) a local jurisdiction to provide financial assistance to eligible homeowners for the reasonable cost of pumping out septic systems under specified conditions and (2) in fiscal 2020 and 2021, financial assistance to a local jurisdiction to develop a qualifying septic stewardship plan.
- ***Water Supply Financial Assistance Program:*** The General Assembly created the Water Supply Financial Assistance Program in 1982 to address the deteriorating condition of the State’s water supply infrastructure and the lack of adequate financing available to local governments to upgrade water supply systems. This program provides grants to assist small communities in the acquisition, construction, equipping, rehabilitation, and improvement of publicly owned water supply facilities. The State may provide up to 87.5% of total eligible project costs (not to exceed \$1.5 million per project), and a minimum 12.5% local match is required. In recent years, all assistance has been in the form of grants rather than loans. This

program is often used in conjunction with other sources of federal and State financial assistance (such as the DWRLF) to achieve project affordability.

- ***Hazardous Substance Clean-Up Program:*** The Hazardous Substance Clean-Up Program provides funds for cleaning up uncontrolled waste sites listed on the federal National Priorities List (Superfund) and other uncontrolled waste sites within the State that do not qualify for federal funding through the Superfund program. The State provides up to 100% of the costs of cleanup for the projects not included on the National Priorities List. At orphan sites, sites lacking a financially viable responsible party to pay for the cleanup, the State provides 100% of the cost of the preliminary site assessment. In all cases, the program seeks cost recovery when possible from responsible parties. The program also provides the State's share (10%) of remediation costs for federal Superfund orphan sites with the remainder provided through the federal share (90%).
- ***Mining Remediation Program:*** Where there is no financially viable responsible party, the program provides funding for remediation of abandoned lands and waters impacted by inadequate coal mining reclamation practices prior to the passage of the federal Surface Mine Control and Reclamation Act of 1977. The program works through the Maryland Abandoned Mine Land Division. Projects include reclamation of surface mine high walls and pits, stabilization of landslides, restoration of stream banks to address flooding, extinguishing underground coal mine and coal refuse fires, stabilization of coal refuse piles, water supply replacement, stabilizing buildings and roads that are impacted by underground mine subsidence, and acid mine drainage treatment projects.
- ***Comprehensive Flood Management Program:*** Last funded in fiscal 2003, the program provides grant funding to local governments for projects that reduce the risk of loss of life and property from flooding. Grant funds may be used to acquire flood-prone properties for demolition or relocation; install flood warning systems; and construct flood control projects, including engineering studies required to support the design of these projects. Capital projects that assist with flood management techniques may include but are not limited to flood control dams, levees and dikes, stormwater detention or retention structures, and flood proofing.

## ***Performance Measures and Outputs***

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In January of each year, MDE solicits interest for funding from the WQRLF and the DWRLF. The solicitation of interest is available to local governments and private drinking water providers. MDE's funding solicitation for fiscal 2020 funding is reflected in **Exhibit 1**. MDE's solicitation distinguishes between clean water and drinking water type projects with the majority of funding solicited for clean water projects. As reflected in the exhibit, the funding demand of \$1.6 billion exceeds the \$159.7 million for the WQRLF and the DWRLF in the fiscal 2020 allowance.

**Exhibit 1**  
**MDE Capital Program Funding Solicitation for Revolving Loan Funds**  
**Fiscal 2020**  
**(\$ in Millions)**

<b><u>Project Type</u></b>	<b><u>Applications</u></b>	<b><u>Total Project Cost</u></b>	<b><u>Funding Requested from MDE</u></b>
<b>Clean Water</b>			
Secondary Treatment	3	\$430.280	\$360.151
Advanced Treatment	11	235.611	146.815
Sewerage (including I/I & CSO)	58	413.161	359.892
Stormwater	11	228.959	158.469
Hydromodification	2	13.918	12.803
Landfills	0	0.000	0.000
Other	12	405.783	382.320
<b>Subtotal</b>	<b>97</b>	<b>\$1,727.712</b>	<b>\$1,420.450</b>
<b>Drinking Water</b>			
Source Water Development	1	\$1.141	\$1.141
Water Treatment Plant	3	6.328	4.542
Transmission/Distribution Mains	16	28.649	27.459
Water Storage	5	332.272	112.309
Other	0	0.000	0.000
<b>Subtotal</b>	<b>25</b>	<b>\$368.390</b>	<b>\$145.450</b>
<b>Total</b>	<b>122</b>	<b>\$2,096.101</b>	<b>\$1,565.900</b>

CSO: combined sewer overflow

I/I: infiltration or inflow

MDE: Maryland Department of the Environment

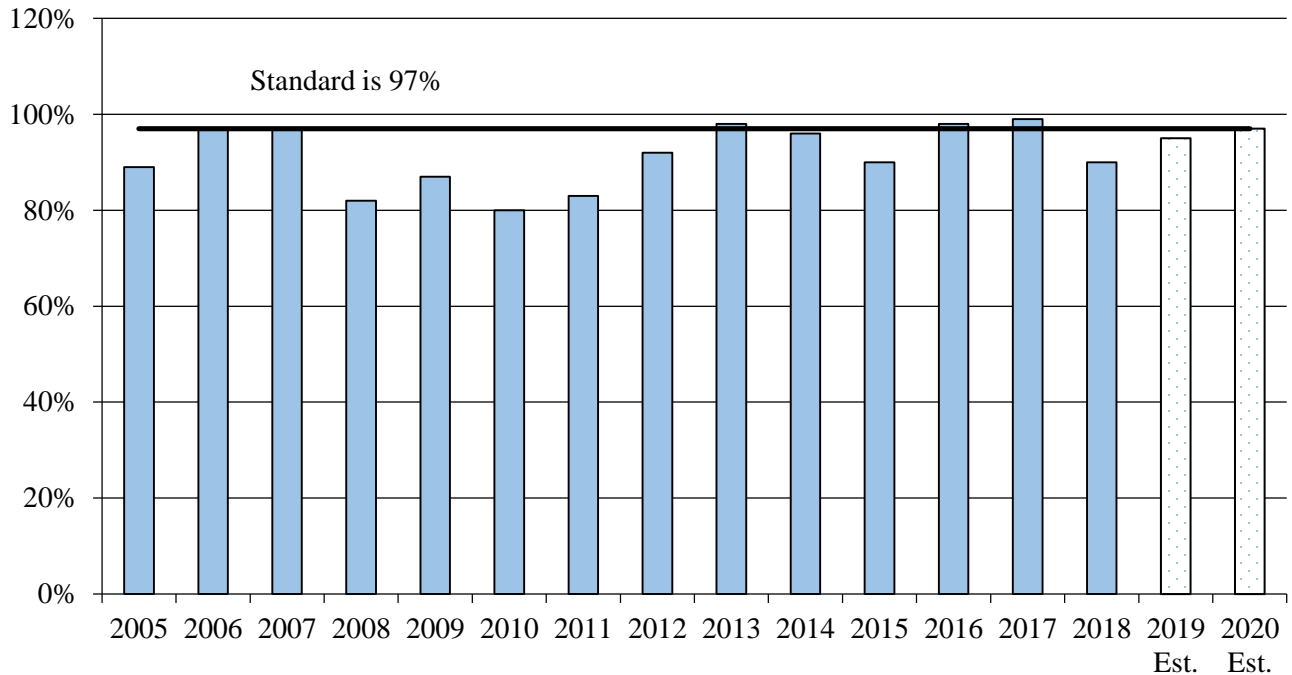
Source: Maryland Department of the Environment

## DWRLF

**Exhibit 2** shows an overall trend toward a cleaner public water system in Maryland. However, between fiscal 2017 and 2018, there was decrease in the percent of Marylanders served by systems that are in compliance with all drinking water regulations for which the department has primacy. This is due to the occurrence of violations at several large water systems that serve over 10,000 persons. Fortunately, the violations are for monitoring and reporting and considered technical and not a public health concern.



**Exhibit 2**  
**Marylanders Served by Public Water Systems in Significant Compliance**  
**Fiscal 2005-2020 Est.**



Source: Governor's Fiscal 2008-2016 Budget Books; Department of Budget and Management, Fiscal 2015-2020

## BRF – Wastewater Projects

**Exhibit 3** shows the status of efforts to install BNR and ENR technology at the 67 major WWTPs. BNR technology allows WWTPs to achieve wastewater effluent quality of 8 mg/L total nitrogen and 3 mg/L total phosphorus. As of January 2019, of the 67 major WWTPs, 97% are operating at the BNR level (up from 94% as of January 2018), and 94% are operating at the ENR level (up from 84% as of January 2018).

**Exhibit 3**  
**Status of BNR and ENR Construction**  
**Through January 2019**

	<u><b>BNR</b></u>	<u><b>ENR</b></u>
Pre-planning	0	0
Planning	0	1
Design	0	0
Construction	2	3
Under Operation	65	63
<b>Total</b>	<b>67</b>	<b>67</b>

BNR: biological nutrient removal

ENR: enhanced nutrient removal

Note: The Bay Restoration Fund Advisory Committee added the Hampstead wastewater treatment plant, increasing the major plants to 67.

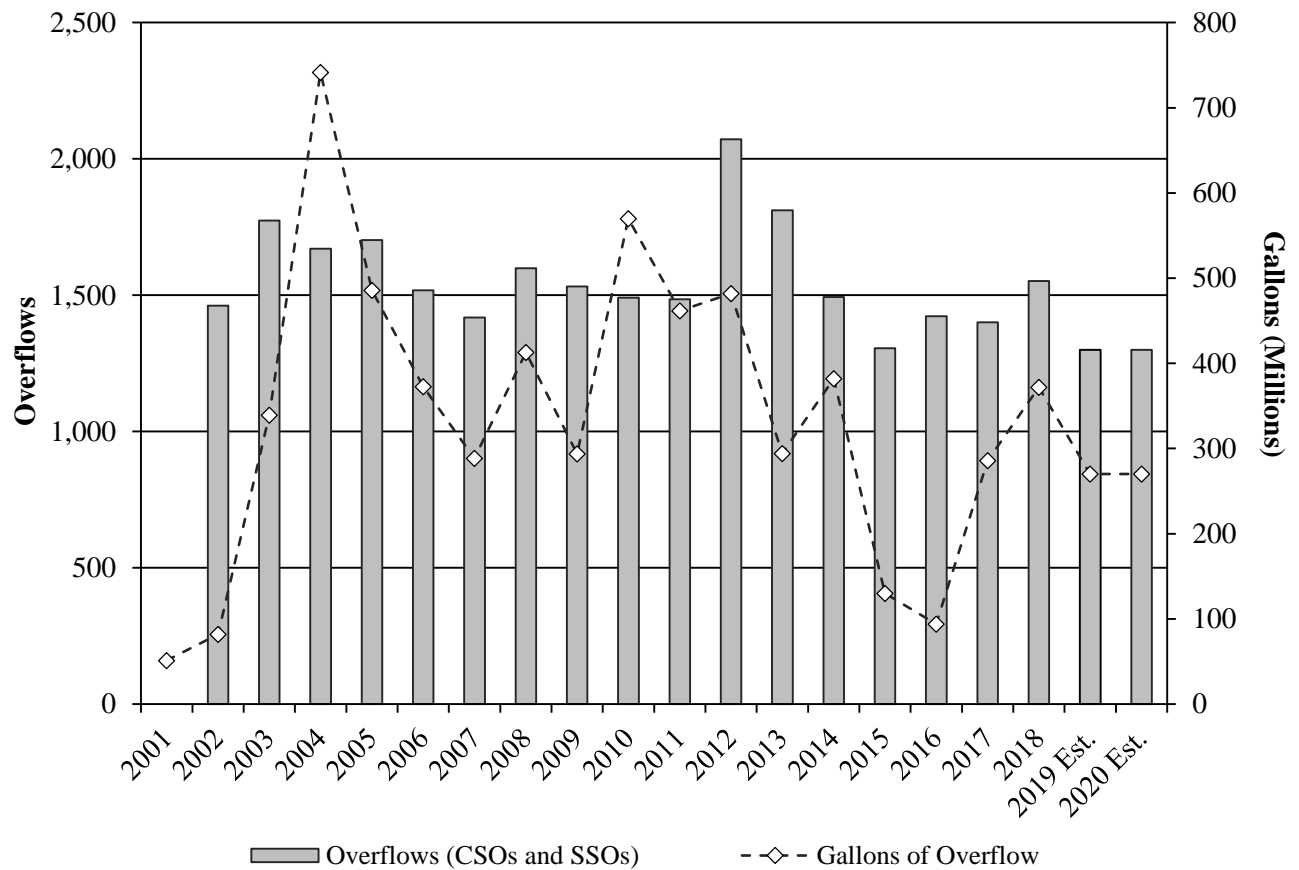
Source: Maryland Department of the Environment

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A number of Maryland's jurisdictions have signed consent decrees requiring the upgrade of their sewer systems due to the release of untreated sewage from facilities with National Pollutant Discharge Elimination System permits. These releases are called CSOs if a jurisdiction has a single system carrying both storm and sanitary sewer water, and it is called a sanitary sewer overflow if the two systems are separated.

As illustrated in **Exhibit 4**, the number of gallons of overflow has shown a decreasing trend between fiscal 2010 and 2018. However, over the fiscal 2001 through 2018 period, it appears very little progress has been made to reduce the number of overflows. Large overflows in a particular year may be attributable to a few extreme events, such as in Cumberland and La Vale in Allegany County in recent years. MDE has noted that funding for sewer rehabilitation, progress on improvements and repairs to collection systems, and the amount of rainfall will determine future sewer overflow reductions and that it has very little control over either the number of overflows or the associated gallons.

**Exhibit 4**  
**CSO and SSO Overflows**  
**Fiscal 2001-2020 Est.**



CSO: combined sewer overflow  
SSO: sanitary sewer overflow

Note: The number of gallons of overflow is calculated by the annual net change in number of gallons of overflows from the fiscal 2003 to 2005 average.

Source: Governor’s Fiscal 2008-2016 Budget Books; Department of Budget and Management, Fiscal 2015-2020

## Hazardous Substance Clean-Up Program

The previous performance measure for the Hazardous Substance Clean-Up Program was the number of properties on the State Master and Non-Master Lists that are given a “No Further Action” determination and moved to the formerly investigated sites category or archived. The State Master List identified potential hazardous waste sites in Maryland and included sites identified under the EPA’s

Superfund program. The Non-Master List was comprised of sites under investigation or that had previously been investigated but were not on the State Master List. However, beginning in 2014, MDE combined all the sites into a single list called the Brownfield Master Inventory (BMI), which was an amalgamation of the State Master List, the Non-Master List, a Federal Facilities list, a Voluntary Cleanup Program list, a Formerly Used Defense Site list, and a Brownfield list.

As shown in **Exhibit 5**, based on February 2019 data, the number of active and archived BMI sites increased steadily between fiscal 2014 and the 2019 estimate. However, sites can move between the active and archived list based on whether a prospective property purchaser enrolls the property in the Voluntary Cleanup Program or new environmental data suggests inclusion. Furthermore, BMI overstates the need for the Hazardous Substance Clean-Up Program because the Voluntary Cleanup Program and other sites for which the Hazardous Substance Clean-Up Program are not eligible are constantly being added to BMI. MDE only uses State funds to conduct site assessment or remediation activities in situations where there is no financially viable responsible party. Therefore, a more accurate measure for the program would be a measure of orphan sites – sites that do not have a financially responsible party – and thus are eligible for the Hazardous Substance Clean-Up Program.

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**Exhibit 5**  
**Brownfield Master Inventory Sites**  
**Fiscal 2014-2019 Est.**

	<u><b>2014</b></u>	<u><b>2015</b></u>	<u><b>2016</b></u>	<u><b>2017</b></u>	<u><b>2018</b></u>	<u><b>2019 Est.</b></u>
Active BMI	748	727	1,033	1,130	1,166	1,201
Archived BMI	687	734	986	1,058	1,087	1,181
<b>Total Sites</b>	<b>1,435</b>	<b>1,461</b>	<b>2,019</b>	<b>2,188</b>	<b>2,253</b>	<b>2,382</b>

BMI: Brownfield Master Inventory

Note: The fiscal 2019 data is as of February 12, 2019.

Source: Maryland Department of the Environment

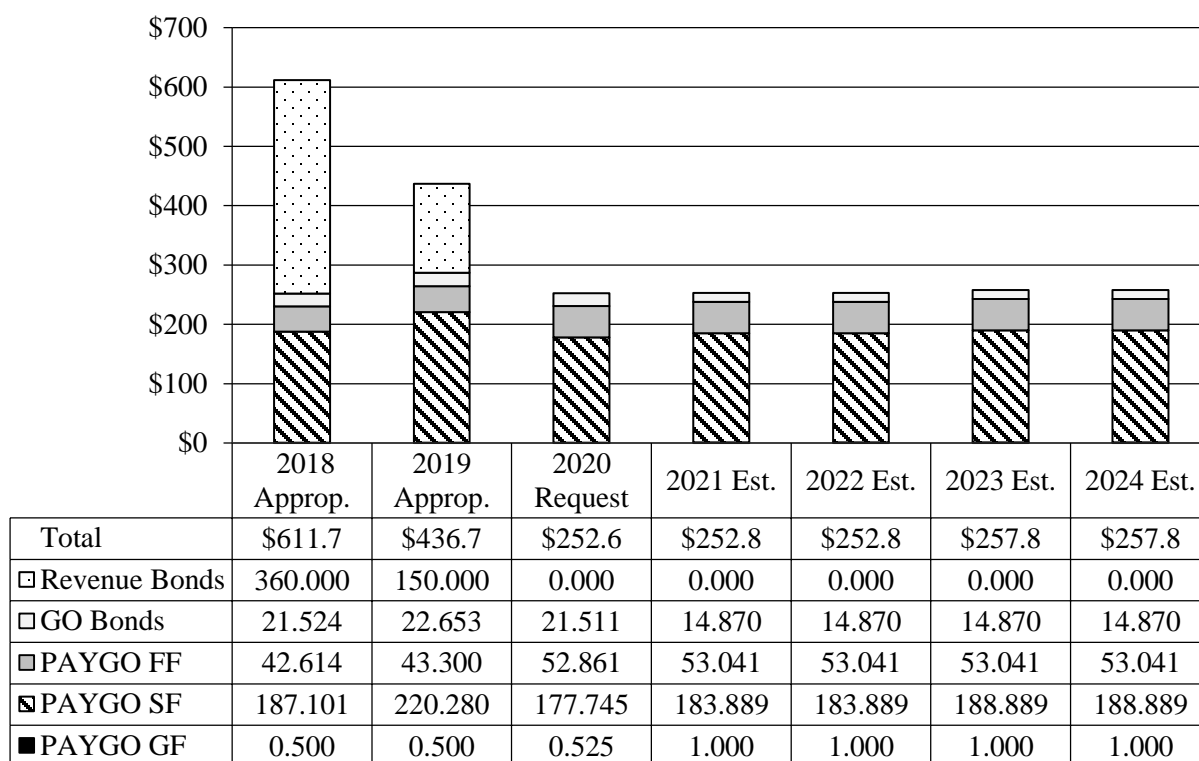
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## Budget Overview

### Fiscal 2020 Budget

MDE's fiscal 2020 capital program includes \$0.5 million in general funds, \$177.3 million in special funds, \$52.9 million in federal funds, and \$21.5 million in general obligation (GO) bonds for a total of \$252.6 million. The overall change between fiscal 2019 and 2020 is a \$184.1 million decrease, as shown in **Exhibit 6**. The decrease in funding between fiscal 2019 and 2020 is primarily attributable to the \$150.0 million reduction in revenue bond authorization for the WQRLF.

**Exhibit 6**  
**MDE Capital Programs Funding**  
**Fiscal 2018-2024 Est.**  
**(\$ in Millions)**



FF: federal funds

GF: general funds

GO: general obligation

MDE: Maryland Department of the Environment

PAYGO: pay-as-you-go

SF: special funds

Source: Governor's Capital Budget, Fiscal 2020; Department of Budget and Management, Capital Budget Worksheets

For the out-years, the overall funding available for MDE’s capital programs appears to be relatively flat. However, this does not account for the \$120.0 million in revenue bonds planned for fiscal 2021 for the WQLRF and the \$100.0 million in BRF – Wastewater revenue bonds planned for fiscal 2022.

**Exhibit 7** compares the 2018 and 2019 *Capital Improvement Programs* (CIP). The main change over the planning period is a reduction in the estimated amount of special funds for the WQLRF. The increase in federal funds reflects additional capitalization expected for the WQLRF and the DWRLF. GO bonds increase for fiscal 2020, primarily as a result of the inclusion of the \$5.0 million for the Comprehensive Flood Management Program and an increased match requirement for the WQLRF fiscal 2019 federal funds that is being addressed in fiscal 2020.

**Exhibit 7**  
**2018 and 2019 CIP Comparison**  
**(\$ in Millions)**

	<u>2020 Request</u>	<u>2021 Est.</u>	<u>2022 Est.</u>	<u>2023 Est.</u>	<u>2024 Est.</u>
<b>2019 CIP</b>					
General Funds	\$0.525	\$1.000	\$1.000	\$1.000	\$1.000
Special Funds	177.745	183.889	183.889	188.889	188.889
Federal Funds	52.861	53.041	53.041	53.041	53.041
GO Bonds	21.511	14.870	14.870	14.870	14.870
<b>Total</b>	<b>\$252.642</b>	<b>\$252.800</b>	<b>\$252.800</b>	<b>\$257.800</b>	<b>\$257.800</b>
<b>2018 CIP</b>					
General Funds	\$1.000	\$1.000	\$1.000	\$1.000	n/a
Special Funds	217.270	219.270	219.270	224.270	n/a
Federal Funds	43.300	43.300	43.300	43.300	n/a
GO Bonds	12.430	12.430	12.430	12.430	n/a
<b>Total</b>	<b>\$274.000</b>	<b>\$276.000</b>	<b>\$276.000</b>	<b>\$281.000</b>	<b>\$0.000</b>
<b>Difference</b>					
General Funds	-\$0.475	\$0.000	\$0.000	\$0.000	\$1.000
Special Funds	-39.525	-35.381	-35.381	-35.381	188.889
Federal Funds	9.561	9.741	9.741	9.741	53.041
GO Bonds	9.081	2.440	2.440	2.440	14.870
<b>Total</b>	<b>-\$21.358</b>	<b>-\$23.200</b>	<b>-\$23.200</b>	<b>-\$23.200</b>	<b>\$257.800</b>

CIP: *Capital Improvement Program*

GO: general obligation

Note: No funding is reflected beyond the CIP because that is the five-year planning period used by the Administration. Estimates for programmed funding for fiscal 2024 for the 2018 CIP are outside the five-year planning period.

Source: *Capital Improvement Program*, 2018 and 2019

## Matching Federal Funding

The fiscal 2020 authorization of GO bond match funding to the federal capitalization for the WQRLF and the DWRLF has increased. MDE received a higher amount of federal funding for fiscal 2019 than originally budgeted, and so the requested 20% matching funding was insufficient. For fiscal 2020, the amount of funding needed for fiscal 2020 as well as the balance of match funding for fiscal 2019 is budgeted.

## Highlights

The changes in funding between fiscal 2019 and 2020 are reflected in terms of the program overall difference in **Exhibit 8**.

### Exhibit 8 MDE Capital Funding Changes Fiscal 2019-2020 (\$ in Millions)

<u>Program</u>	<u>2019 Approp.</u>	<u>2020 Projected</u>	<u>2020 Request</u>	<u>2019 Appropriation to 2020 Request Difference</u>	<u>2020 Projected to 2020 Request Difference</u>
Maryland Water Quality Revolving Loan Fund	\$306.600	\$150.000	\$127.657	-\$178.943	-\$22.343
Energy-Water Infrastructure Program	8.000	0.000	0.000	-8.000	0.000
Water Supply Financial Assistance Program	3.303	2.500	1.960	-1.343	-0.540
Maryland Drinking Water Revolving Loan Fund	32.830	30.000	32.000	-0.830	2.000
Bay Restoration Fund – Wastewater Projects	70.000	75.000	70.000	0.000	-5.000
Septic System Upgrade Program	15.000	15.000	15.000	0.000	0.000
Mining Remediation Program	0.500	0.500	0.500	0.000	0.000
Hazardous Substance Clean-Up Program	0.500	1.000	0.525	0.025	-0.475
Comprehensive Flood Management Program	0.000	0.000	5.000	5.000	5.000
<b>Total</b>	<b>\$436.733</b>	<b>\$274.000</b>	<b>\$252.642</b>	<b>-\$184.091</b>	<b>-\$21.358</b>

MDE: Maryland Department of the Environment

Source: Department of Budget and Management; Department of Legislative Services

The highlighted changes in funding for fiscal 2020 are as follows.

- ***Maryland WQRLF:*** The WQRLF allowance for fiscal 2020 is \$127.7 million, which is \$178.9 million less than the fiscal 2019 working appropriation and \$22.3 million less than the amount programmed in the 2018 CIP for fiscal 2020. The funding decrease relative to the fiscal 2019 working appropriation is due to a reduction of \$150.0 million in revenue bonds, \$30.3 million in special funds, and \$4.4 million in GO bonds, which are offset partially by an increase of \$5.8 million in federal funds that capitalize the revolving loan fund. The funding decrease relative to the 2018 CIP amount for fiscal 2020 reflects a reduction of \$30.3 million in special funds based on the fiscal 2020 project list. This decrease is offset partially by an increase of \$5.8 million in additional federal funds. When combined with an increase of federal funds received in fiscal 2019, there is the need for an additional \$2.2 million in GO bond matching funding. The fiscal 2020 allowance includes \$80.1 million in special funds, \$38.8 million in federal funds, and \$8.8 million in GO bond authorizations used as matching funding. Looking forward, MDE plans on issuing \$120.0 million in revenue bonds in fiscal 2021 to meet anticipated project funding requests. The largest project in the fiscal 2020 allowance is the Montgomery County Municipal Separate Storm Sewer System Permit – Water Quality Restoration Projects. This project is budgeted \$60.6 million and is intended to help the county comply with its discharge permit and meet its requirements under the Chesapeake Bay Watershed Implementation. Projects to be funded include stormwater structural treatment options, such as small rain gardens, environmental site design options, pond retrofits, green infrastructure best management practices, green streets, large stream restorations as well as repairs to storm drain systems. The jurisdictions using the WQRLF for stormwater programs include Baltimore City and Prince George's and Montgomery counties.
- ***Energy-Water Infrastructure Program:*** The Energy-Water Infrastructure Program received final funding in fiscal 2019, which accounts for a \$8.0 million decrease in special funds between fiscal 2019 and 2020. The program was funded from the agreement by which, under Public Service Commission Order 86372, Dominion Cove Point is allowed to construct a 130-megawatt nameplate capacity electric generating station at the existing liquefied natural gas terminal site in Calvert County near Cove Point.
- ***Water Supply Financial Assistance Program:*** The Water Supply Financial Assistance Program funding of \$1,960,000 in GO bonds reflects a \$1,343,000 decrease relative to the amount budgeted in fiscal 2019 and is \$540,000 less than the amount programmed in the 2018 CIP for fiscal 2020. The reduced funding relative to the 2018 CIP amount programmed for fiscal 2020 reflects the needs for the projects that are recommended for funding. The two largest projects on the fiscal 2020 allowance are the Decatur Street crosstown water main replacement in Allegany County (\$703,000) and the Rock Hall water meter system upgrade (\$669,000). In addition, there is budget bill language in the fiscal 2020 authorization specifying that \$250,000 of the authorization shall be used to provide a grant to the Town of New Windsor to pay a portion of the loans issued by MDE for the recently completed water supply projects. This funding appears to reflect the repayment of a portion of the \$390,000 loan from the fiscal 2013 DWRLF project to construct improvements to the New Windsor water system. **The**



**Department of Legislative Services (DLS) recommends that the language be struck and that the Water Supply Financial Assistance Program funding be reduced by \$792,462 to reflect that the \$250,000 in funding for the Town of New Windsor – Water Storage Tanks project does not advance the purposes of the program as it only alleviates the financial responsibility for a project that has already been completed, and to reflect the availability of \$542,462 in funding from the fiscal 2019 budget plan that still remains to be determined.**

- **Maryland DWRLF:** The DWRLF allowance for fiscal 2020 is \$32.0 million, which is \$0.8 million less than the fiscal 2019 working appropriation and \$2.0 million more than the amount programmed in the 2018 CIP for fiscal 2020. The funding decrease relative to the fiscal 2019 working appropriation is due to a reduction of \$4,208,000 in special funds and \$363,000 in GO bonds, which is offset partially by an increase of \$3,741,000 in federal funds. The funding increase relative to the 2018 CIP amount for fiscal 2020 reflects an increase of \$3.7 million in federal funds. When combined with an increase of federal funds received in fiscal 2019, there is the need for an additional \$2.5 million in GO bond matching funding. The increase in federal funds and matching GO bonds is offset partially by a reduction of \$4.2 million in special funds based on the fiscal 2020 project list. The fiscal 2020 allowance includes \$12.7 million in special funds, \$14.0 million in federal funds, and \$5.3 million in GO bond authorization used as matching funding. The funding provides for 12 projects serving 749,915 homes in nine subdivisions throughout the State. The largest projects in the fiscal 2020 allowance are as follows: the Ashburton Reservoir Improvements Project is budgeted \$9.5 million and would replace the existing open surface finished water reservoir at the Ashburton Reservoir as part of the administrative order to comply with the Long Term 2 Enhanced Surface Water Treatment Rule; the Druid Lake Tanks project is budgeted \$7.2 million and would replace an existing open surface finished water reservoir at the Druid Lake Reservoir as part of the same administrative order; and the Westover Water Service project is budgeted \$5.8 million and would connect homes with failing septic systems to public water in Somerset County. The National Drinking Water Needs Survey was released in March 2018. Maryland's reported 20-year drinking water infrastructure need is \$9.3 billion of which Maryland's highest category of need is transmission and distribution at \$7.0 billion. MDE notes that Maryland's response to the National Drinking Water Needs Survey means that Maryland was awarded a higher percentage of the overall funding, which can be expected to be available for five more years or until the next survey is completed. **Exhibit 9** shows the funding for the DWRLF in MDE's operating and pay-as-you-go budgets.

**Exhibit 9**  
**Drinking Water Revolving Loan Fund – Operating and PAYGO**  
**Fiscal 2019-2020**

	<b>Federal Fiscal 2017 <u>State Fiscal 2019</u></b>	<b>Federal Fiscal 2018 <u>State Fiscal 2020</u></b>
Capital Projects	\$13,007,910	\$14,040,120
2% Set-aside (Technical Assistance)	279,740	406,960
4% Set-aside (DWRLF Administration)	0	813,920
10% Set-aside (DW Program Support)	1,398,700	2,034,800
15% Set-aside (Local Assistance)	2,098,050	3,052,200
<b>Total</b>	<b>\$16,784,400</b>	<b>\$20,348,000</b>

DW: drinking water

DWRLF: Drinking Water Revolving Fund

PAYGO: pay-as-you-go

Source: Maryland Department of the Environment

- BRF – Wastewater Projects:** Funding for the BRF – Wastewater Projects is \$70.0 million in special funds, which is even with fiscal 2019 but is \$5.0 million less than what was programmed in the 2018 CIP for fiscal 2020 because of the funding mix for projects across MDE’s capital program. The funding provides for 16 projects in eight jurisdictions and will reduce approximately 179,418 pounds of nitrogen per year from flowing to the Chesapeake Bay and sewer rehabilitation projects that serve 541,493 homes throughout Maryland. For fiscal 2020, the largest project is in Allegany County and would construct a 78-inch parallel pipeline from Mill Race to a CSO storage facility in order to address a consent decree. The fiscal 2020 amount budgeted is \$20.1 million. MDE anticipates issuing revenue bonds again in fiscal 2022.
- Septic System Upgrade Program:** The fiscal 2020 appropriation of \$15.0 million in special funds for the Septic System Upgrade Program is equal to both the fiscal 2019 appropriation and the fiscal 2020 amount programmed in the 2018 CIP. There is also \$1.5 million in MDE’s operating budget that is programmed by Chapter 379 (BRF – Authorized Uses – Local Entities), which requires that up to 10% of the funds in the septic account of the BRF be distributed to a local public entity delegated by MDE – local health departments – to cover reasonable costs associated with implementation of MDE regulations pertaining to septic systems that use BAT for nitrogen removal. The program anticipates upgrading 1,100 systems in fiscal 2020. Of note, Chapter 585 (On-Site Sewage Disposal System – Watershed Implementation Plan and BRF Disbursements and Financial Assistance) expanded the uses of the BRF Septic Account to include funding for (1) a local jurisdiction to provide financial

assistance to eligible homeowners for the reasonable cost of pumping out septic systems under specified conditions and (2) in fiscal 2020 and 2021, financial assistance to a local jurisdiction to develop a qualifying septic stewardship plan. MDE notes that it is not aware of any jurisdictions seeking to use BRF funds to develop a plan, but that a jurisdiction cannot fund pump outs unless a septic stewardship plan is in place.

- ***Mining Remediation Program:*** The Mining Remediation Program receives its sixth year of funding in fiscal 2020 – \$500,000 in GO bonds – that is equal to both the fiscal 2019 authorization and the 2018 CIP amount programmed for fiscal 2020. The money provides for final funding of the Upper Georges Creek: Borden Shaft Restoration Project and first-time funding for the Jennings Run Watershed: Bessemer Acid Mine Drainage Remediation Project and the Upper Georges Creek: Woodland Creek Stream Sealing Project. MDE notes that the Upper Georges Creek: Borden Shaft Restoration Project is in design and that construction is expected to start this summer. The Jennings Run Watershed: Bessemer Acid Mine Drainage Remediation Project and the Upper Georges Creek: Woodland Creek Stream Sealing Project are both expected to start construction in June 2020, which would allow for fiscal 2021 funding to be used instead, but MDE notes that funds must be awarded before construction can start. Future projects in the pipeline will address the remaining abandoned mine drainage sites targeted for remediation in the Jennings Run WIP and stream sealing projects in sections of stream identified as having stream loss in Upper Georges Creek. Overall, MDE has estimated a total Mining Remediation Program need of approximately \$60 million – split evenly between the federal government and the State. However, MDE has noted that the federal funding is scheduled to end in fiscal 2022. **DLS recommends that MDE comment on its future plan for abandoned mine reclamation work given the end of federal funding in fiscal 2022.**
- ***Hazardous Substance Clean-Up Program:*** The fiscal 2020 allowance includes \$525,000 in general funds for the Hazardous Substance Clean-Up Program, which is \$25,000 more than the fiscal 2019 working appropriation but is \$475,000 less than the amount programmed in the 2018 CIP for fiscal 2020. The reduction in funding relative to the 2018 CIP amount reflects workload capabilities and project readiness. The fiscal 2020 funding will allow continued funding for the construction of the Chemical Metals, Site No. 1 project in Baltimore City and Mister G’s Cleaners project in Prince George’s County as well as planning for the former Ames Shopping Plaza project in Harford County. In addition, the funding would provide for site assessments across the State. There is an additional project in the fiscal 2019 and 2020 project lists that does not appear to be moving forward – the 1600 Harford Avenue (former Stop, Shop and Save) project in Baltimore City. **DLS recommends that the Hazardous Substance Clean-Up Program appropriation be reduced by \$110,000 in general funds since the 1600 Harford Avenue (former Stop, Shop and Save) project does not appear to be moving forward.**
- ***Comprehensive Flood Management Program:*** The fiscal 2020 allowance includes \$5.0 million in one-time funding for the Comprehensive Flood Management Program. No funding was budgeted for the program in fiscal 2019, and the program was not included in the 2018 CIP amount for fiscal 2020. Therefore, there is an increase of \$5.0 million relative to both

the fiscal 2019 appropriation and the amount programmed in the 2018 CIP for fiscal 2020. Projects will be selected based on applications received by MDE. The program last received \$667,000 in GO bond authorization in fiscal 2003. SB 269 and HB 428 (Comprehensive Flood Management Grant Program – Awards for Flood Damage and Mandatory Funding) have been introduced in the 2019 legislative session. The bills would expand the policy and purposes of provisions of State law regarding flood control and watershed management to include infrastructure repairs, debris removal, and emergency protection work associated with a flood event. In particular, the bills authorize MDE, under its existing program, to award grants to subdivisions that have incurred at least \$1.0 million in infrastructure damage by a flood event that occurred on or after January 1, 2009, and require the Governor to include in the annual State budget an annual appropriation of at least \$5.0 million for the program. **DLS recommends that MDE comment on the status of meeting background Comprehensive Flood Management Program requirements, such as watershed studies, as laid out in Environment Article Section 5-803; the proposed project list; the proposed criteria; and whether funding will be made available to Ellicott City given the repeat flooding event on May 27, 2018.**

## *Updates*

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### **1. Status of Consent Decrees**

Eight Maryland jurisdictions have consent decrees for various water quality violations. **Exhibit 10** shows the status of these consent decrees. Overall, MDE’s fiscal 2020 allowance includes \$44.3 million in order to address the consent decrees.

**Exhibit 10**  
**Status of Consent Decrees**  
**Fiscal 2020**  
**(\$ in Millions)**

<u>Community</u>	<u>BRF</u>	<u>WQRLF</u>	<u>Total</u>	<u>Updates</u>
Allegany	\$12.34	\$3.52	\$15.86	The county is in its thirteenth year of a 20-year implementation plan. Currently, the county has two projects under construction, one project in design, and one project in the planning phase.
Cumberland	20.1	6.07	26.17	The city is in its thirteenth year of a 20-year implementation plan. Construction is 26% completed for the city’s Combined Sewage Overflow Storage Facility (\$31.5 million project). Also, the city has another project in design.
Frostburg	2.25	0	2.25	The town is in its thirteenth year of a 20-year implementation plan with one project currently under construction and another in design.

*UA01 – Department of the Environment – Capital*

<u>Community</u>	<u>BRF</u>	<u>WQRLF</u>	<u>Total</u>	<u>Updates</u>
LaVale	0	0	0	The LaVale Sanitary Commission is in its thirteenth year of a 20-year implementation plan. The commission recently completed two projects.
Westernport	0	0	0	The town is in its thirteenth year of a 20-year implementation plan. Currently, the town has no active project under this plan because it has been focusing on improving its deteriorated drinking water system.
Baltimore City	0	0	0	Recently, the Maryland Department of the Environment (MDE) and the Environment Protection Agency (EPA) reached an agreement with Baltimore City to modify the 2002 Consent Decree. The modified agreement requires the city to complete approximately \$2.5 billion of infrastructure rehabilitation to address over 80% of its sewage overflow by 2021. Most of the city's sewer infrastructure issues are related to sanitary sewer overflow. Relatively few combined sewer overflow corrections would be needed. The city continues to complete a large number of sanitary sewer overflow and combined sewer overflow correction projects using MDE and local funds. In addition, the city has applied to EPA for Water Infrastructure Finance and Innovation Act Program funding in 2017 and 2018. The Water Infrastructure Finance and Innovation Act Program has tentatively budgeted \$200 million in response to the city's 2017 application (Letter of Interest). Many projects are currently under construction including the Back River Headworks and Wet Weather Management project (approximately \$440 million), which will allow the plant to accept more flows due to the corrected sewer overflow issues while protecting the treatment process during extreme wet weather events.
Salisbury	0	0	0	The city has a consent order for sanitary sewer overflows. The city is planning to complete the sanitary sewer overflow corrections concurrently with the enhanced nutrient removal upgrade.
Cambridge	0	0	0	The Cambridge Combined Sewer Overflow Separations project (with all its phases) was completed on November 14, 2012.
<b>Total</b>	<b>\$34.69</b>	<b>\$9.59</b>	<b>\$44.28</b>	

BRF: Bay Restoration Fund

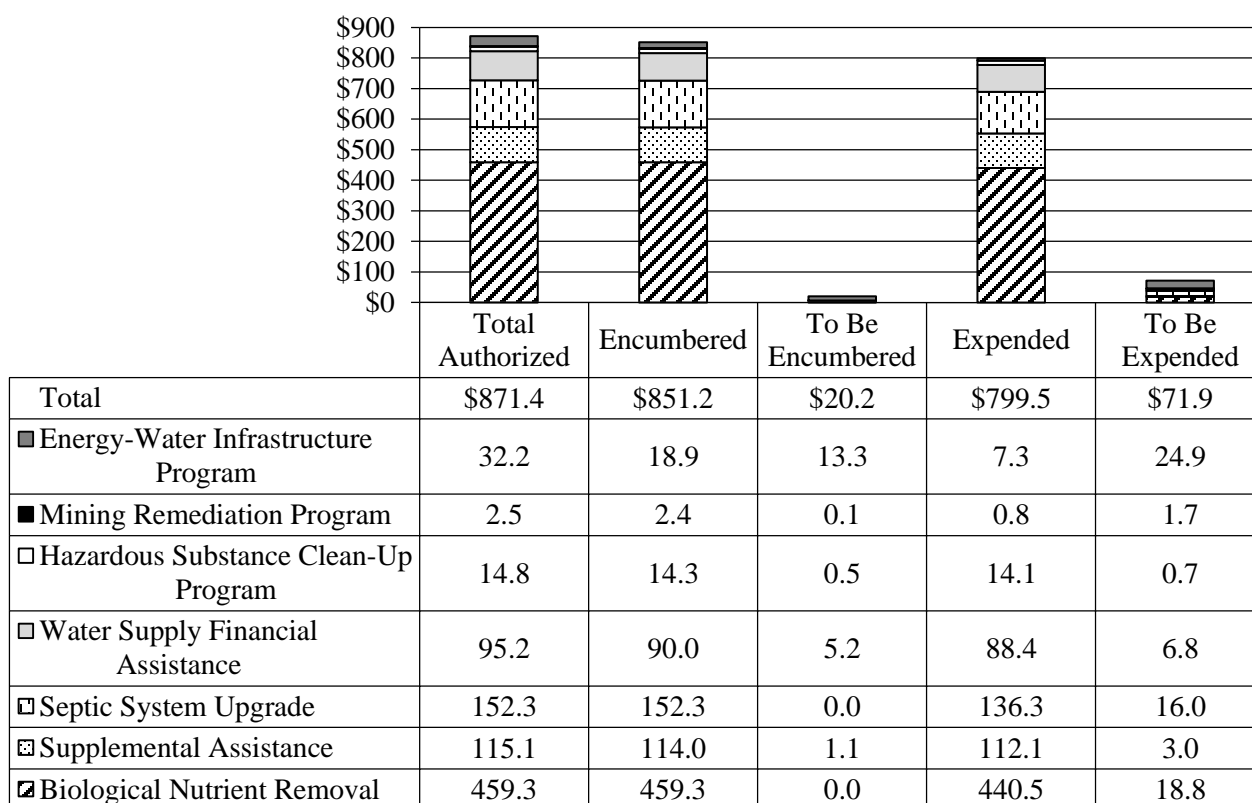
WQRLF: Water Quality Revolving Loan Fund

Source: Maryland Department of the Environment

## Encumbrances and Expenditures

**Exhibit 11** reflects the encumbrance and expenditure levels for the BNR, Supplemental Assistance, Septic System Upgrade, Water Supply Financial Assistance, Hazardous Substance Clean-Up, Mining Remediation, and Energy-Water Infrastructure programs. In general, the exhibit reflects expenditure levels being proportionate to the total authorization for the program with the exception of the Mining Remediation and the Energy-Water Infrastructure programs that have relatively low expenditure levels relative to the amount authorized. These two programs are also the two most recent additions to MDE’s capital program. The largest authorization reflected is for the BNR Program, which has \$459.3 million authorized. Of this amount, all of the funding has been encumbered. The \$18.8 million that remains to be expended typically reflects the delays in reimbursement requests from local governments that are responsible for project procurement and implementation.

**Exhibit 11**  
**Non-BRF Programs – Encumbrances and Expenditures**  
**Program Inception through February 2019**  
**(\$ in Millions)**

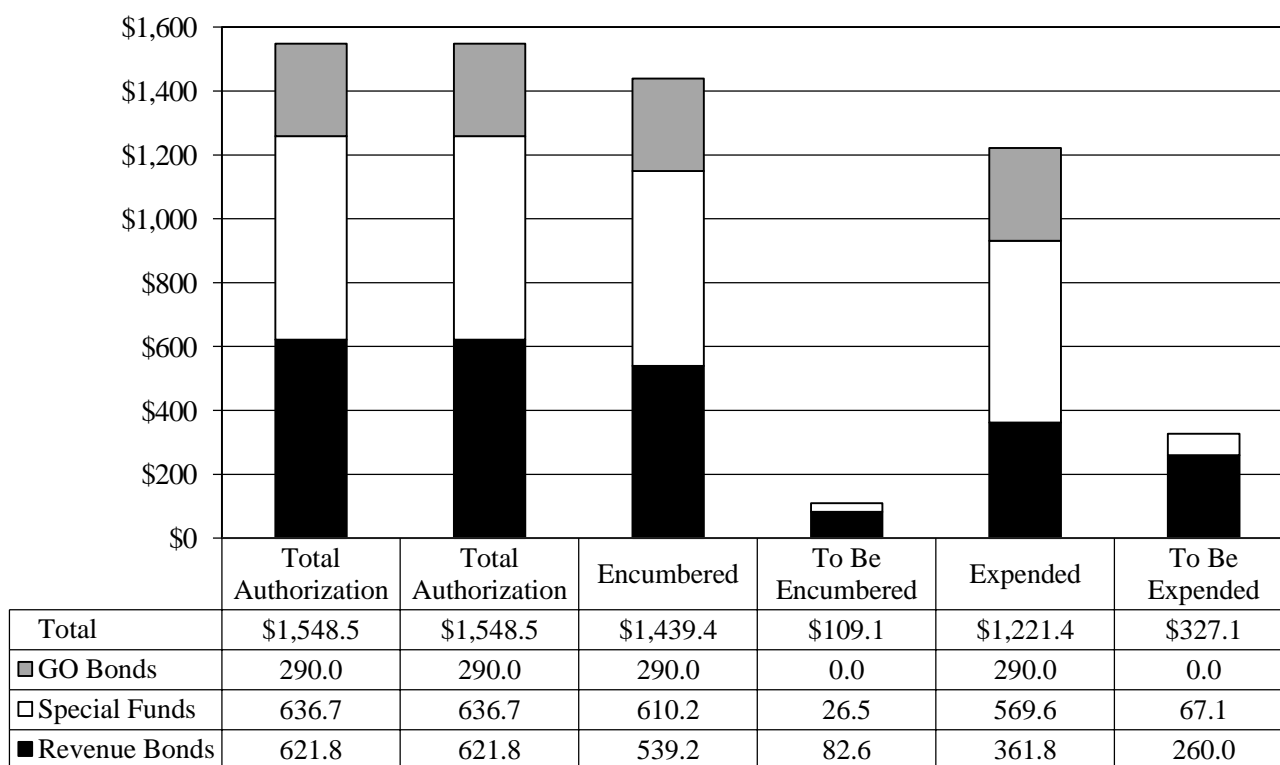


BRF: Bay Restoration Fund

Source: Maryland Department of the Environment

**Exhibit 12** reflects the encumbrances and expenditures for the BRF – Wastewater Projects. The overall authorization is \$1.6 billion of which \$109.1 million remains to be encumbered, and \$327.1 million still remains to be expended. However, the majority of the amount to be encumbered and to be expended reflects MDE’s authorization of \$590.0 million in revenue bonds, which includes the \$60.0 million added in fiscal 2018 for BNR projects in fiscal 2017 and 2018. To date, \$330.0 million in revenue bonds have been issued – \$50.0 million in fiscal 2008, \$100.0 million in fiscal 2014, and \$180.0 million in fiscal 2016 – based on cash flow needs for project reimbursements in order to fund the approximately \$1.25 billion cost of upgrading the 67 major WWTPs to ENR technology. MDE anticipates issuing revenue bonds next in fiscal 2022. Although only \$330.0 million of the revenue bond authorization has been issued, MDE reflects the encumbrance or obligation of \$539.2 million in authorization for projects in anticipation that the revenue bonds will be issued within the next couple of years but will most likely need to be adjusted based on the new revenue bond issuance schedule.

**Exhibit 12**  
**Bay Restoration Fund – Wastewater Projects – Encumbrances and Expenditures**  
**Program Inception through February 2019**  
**(\$ in Millions)**



GO: general obligation

Source: Maryland Department of the Environment

## ***PAYGO Recommended Actions***

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	<b><u>Amount Reduction</u></b>
1. Reduce the appropriation for the Hazardous Substance Clean-Up Program. The 1600 Harford Avenue (former Stop, Shop and Save) project appears to no longer be a viable project.	\$110,000 GF
2. Concur with Governor's allowance of \$80,073,000 in special funds and \$38,820,000 in federal funds for the Water Quality Revolving Loan Fund.	
3. Concur with Governor's allowance of \$12,672,000 in special funds and \$14,041,000 in federal funds for the Drinking Water Revolving Loan Fund.	
4. Concur with Governor's allowance of \$70,000,000 in special funds for the Bay Restoration Fund – Wastewater program.	
5. Concur with Governor's allowance of \$15,000,000 in special funds for the Bay Restoration Fund – Septic Systems program.	
<b>Total General Fund Reductions</b>	<b>\$110,000</b>



## ***GO Bond Recommended Actions***

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1. Approve the \$5,000,000 general obligation bond authorization for the Comprehensive Flood Mitigation Program to provide funds to local governments for projects that reduce the risk of loss of life and property from flooding. Grant funds may be used to acquire flood-prone properties for demolition or relocation; install flood warning systems; and construct flood control projects, including engineering studies required to support the design of these projects. Capital projects that assist with flood management techniques may include but are not limited to flood control dams, levees and dikes, stormwater detention or retention structures, and flood proofing.
2. Approve the \$5,287,000 general obligation bond authorization for the Drinking Water Revolving Loan Fund to finance drinking water projects.
3. Approve the \$8,764,000 general obligation bond authorization for the Water Quality Revolving Loan Fund to finance water quality improvement projects.
4. Approve the \$500,000 general obligation bond authorization for the Mining Remediation Program to design, construct, and equip active and passive measures to remediate damage to water quality related to abandoned mining operations.
5. Strike the language and reduce funding for the Water Supply Financial Assistance Program.

UA01E	Water Supply Financial Assistance Program.....	\$ 1,167,538
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Strike the following language:

Water Supply Financial Assistance Program. Provide funds for assistance to State and local government entities to acquire, design construct, rehabilitate, equip, and improve water supply facilities. The funds shall be administered in accordance with §§ 9-420 through 9-426 of the Environment Article and any regulation adopted in accordance with those sections. ~~Notwithstanding §§ 9-420 through 9-426 of the Environment Article and any regulation adopted in accordance with those sections, \$250,000 of these funds shall be used to provide a grant to the Town of New Windsor to pay a portion of the loans issued by the Maryland Department of the Environment, Water Quality Financing Administration used for the recently completed water supply projects ...~~

**Allowance**  
1,960,000

**Change**  
-792,462

**Authorization**  
1,167,538

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**Explanation:** This action strikes the language on the authorization for the Town of New Windsor – Water Storage Tanks project. In addition, the Water Supply Financial Assistance Program authorization is reduced by \$792,462 to reflect that the \$250,000 in funding for the Town of New Windsor – Water Storage Tanks project does not advance the purposes of the program as it only alleviates the financial responsibility for a prior loan from the Drinking Water Revolving Loan Fund and to reflect the availability of \$542,462 in funding from the fiscal 2019 budget plan that still remains to be determined.

<b>Total General Obligation Bonds Reductions/Additions</b>	<b>\$792,462</b>
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