

Maryland's water bill is coming due — on aging pipes, on the Bay, and on lead. Your capital plan has to keep up.

Century-old mains under Baltimore, a bi-county system carrying a \$4.9 billion capital program, 66 of 67 wastewater plants rebuilt for the Chesapeake, and lead and PFAS deadlines on the same clock. For a utility CFO or capital lead, every one of those forces reshuffles the projects on your list. Invizion helps Maryland utilities re-sequence a capital portfolio in a click — and defend every decision.

1.9M¹ Residents served by WSSC Water across Montgomery and Prince George's counties — Maryland's largest system and the eighth largest in the nation.	\$4.9B² WSSC Water's adopted six-year capital improvements program for FY2026–2031.	66 of 67³ Major Maryland wastewater plants upgraded to enhanced nutrient removal through the Bay Restoration Fund — only Princess Anne remains.	\$598M⁴ EPA WIFIA loans closed for Baltimore's water, wastewater and stormwater rehabilitation between 2018 and 2021.
--	--	--	--

THE MARYLAND LANDSCAPE

Four forces are moving your project list at once

None of these is theoretical, and none of them waits for your next budget cycle. Together they mean the capital plan you approved last year may already be the wrong plan.

AGING SYSTEMS & RATE PRESSURE

A century of pipe, and the rates to match

Baltimore supplies drinking water to about 1.8 million people across the metro region through roughly 3,800 miles of water main, 67,500 valves and 23,000 hydrants — and many of those mains are more than 100 years old⁵ Statewide, more than 3,200 public water systems serve about 5.5 million residents, and over 40% of Maryland's water mains are past their intended service life.⁶

Renewal is not free. WSSC Water's FY2026 budget carried a 9.5% average water-and-sewer rate increase — roughly \$8.53 more per month on a typical household bill⁷ Every deferral becomes a break; every acceleration becomes a rate case.

CHESAPEAKE BAY & WASTEWATER

The Bay sets the standard your plants have to meet

Nutrient limits for the Chesapeake are the defining capital driver for Maryland wastewater. The state has upgraded 66 of its 67 major treatment plants to enhanced nutrient removal, cutting more than 11.6 million pounds of nitrogen and 1.2 million pounds of phosphorus in 2024 alone³

Meeting the standard is not automatic. Baltimore's Back River plant — a 100-MGD facility serving about 1.3 million people — was placed under Maryland Environmental Service control in March 2022 after failing its permit, followed by a June 2022 consent order and a 2023 settlement with the Attorney General⁸

Regionally, Montgomery and Prince George's wastewater flows to DC Water's Blue Plains, the largest advanced treatment plant in the world at 384 MGD of design capacity⁹

LEAD & PFAS

Two funded mandates on the same clock

Maryland community water systems had to submit an initial lead service line inventory by October 16, 2024, and must meet the federal Lead and Copper Rule Improvements — including a baseline inventory and school and childcare monitoring — by November 1, 2027.¹⁰

PFAS lands on top of that. EPA's April 2024 drinking-water rule set enforceable limits of 4.0 parts per trillion for PFOA and PFOS, with initial monitoring due by 2027 and treatment in place later in the decade.¹¹ Maryland released a statewide PFAS action plan in December 2023 and is conducting widespread testing of public water systems — work that turns into treatment capital wherever a system exceeds the limit.¹²

AFFORDABILITY & CUSTOMER TRUST

Every dollar has to survive the billing statement

Maryland utilities are spending against a backdrop of hard-won customer trust. Baltimore's Water Accountability & Equity Act created an Office of Water Advocacy & Customer Appeals and the Water4All affordability program in response to years of billing disputes; the office now investigates hundreds of cases a year.¹³

At the same time, Baltimore is under a modified federal consent decree entered in 2017 to curb sewer overflows, with major work continuing through 2030.¹⁴ Compliance spending, affordability limits, and aging-system renewal all compete for the same rate dollar — and the sequencing between them is exactly what boards fight over.

WHO RUNS MARYLAND'S WATER

A municipal state — a few giant regional systems, and a long tail of small ones

Maryland's water is overwhelmingly public. The majority of systems are municipal or county-run and set their own rates; the Public Service Commission regulates only a small set of investor-owned utilities. The pressures are shared; the accountability path differs.

Municipal & regional utilities

Rates set by county councils, city boards & commissions

WSSC Water ~1.9M served · ~475,000 accounts ·
5,900 mi water main¹

Baltimore City DPW ~1.8M served regionally · 3,800 mi of
main⁵

Howard County \$75M WIFIA loan for Ellicott City
flood & water work⁴

Anne Arundel, Montgomery & Frederick Large county & municipal providers

3,200+ community water systems Serving ~5.5M Marylanders
statewide⁶

Regional wholesale & investor-owned

PSC regulates rates for private systems only

DC Water — Blue Plains 384 MGD · treats Montgomery &
Prince George's flows⁹

PSC-regulated water/sewer companies 22 systems · ~11,000 residential
customers¹⁵

Small & rural systems Where funding and technical gaps
hit hardest

The Public Service Commission notes that the majority of Maryland water systems are municipal and fall outside its jurisdiction.¹⁵

Every capital dollar has to be defensible

Whether you answer to a county council, a city board, or the Public Service Commission, the question is the same: why this project, why now, why at this cost? Maryland's oversight bodies are asking it harder than ever.

County councils, city boards & commissions set rates for the municipal and regional systems that serve most of Maryland — WSSC Water's budget and its 9.5% FY2026 increase were adopted through the bi-county process, in public⁷

Maryland Public Service Commission regulates the infrastructure, rates and billing of 22 investor-owned water and sewer systems serving roughly 11,000 residential customers — a small but rate-scrutinized slice.¹⁵

Maryland Department of the Environment holds Safe Drinking Water Act primacy — lead service line inventories and LCRI compliance by 2027, plus PFAS monitoring under the new federal limits.¹⁰¹¹

MDE water-quality enforcement drives wastewater capital — the Back River takeover and consent order, and Baltimore's sewer consent decree running through 2030, are live examples⁸¹⁴

The money is moving — can your plan absorb it?

Maryland utilities have more capital funding available than they have had in a generation, layered across state and federal programs. The constraint is no longer only dollars — it's readiness: which projects are shovel-ready, which qualify, and how the timing lines up with everything else on the list.

Clean Water SRF (FFY2025) — Maryland's plan drew a \$38.4M base grant plus a \$59.6M IJA supplemental, part of roughly \$248M available for wastewater and stormwater projects¹⁶

Drinking Water SRF (FFY2025) — a \$22.7M base grant, a \$51.7M IJA supplemental, and \$15.9M dedicated to PFAS and emerging contaminants, within roughly \$148M available¹⁷

Bay Restoration Fund — a \$5-per-month wastewater fee that has funneled about \$1.86 billion into plant upgrades since 2004 and driven 66 of 67 major ENR conversions³

EPA WIFIA — \$598M in closed loans for Baltimore's water, wastewater and stormwater work (2018–2021), plus \$75M for Howard County.⁴

MARYLAND WATER, IN BRIEF

Questions Maryland utility leaders are asking

Short, sourced answers — the same facts we'll dig into on a call, in the context of your system.

Who are Maryland's largest water utilities?

WSSC Water is the largest, serving about 1.9 million residents across Montgomery and Prince George's counties through roughly 475,000 accounts and 5,900 miles of water main — the eighth-largest water utility in the country¹ Baltimore City DPW supplies about 1.8 million people regionally through 3,800 miles of main, many of them over a century old⁵

What does the Chesapeake Bay mean for my wastewater capital plan?

Nutrient limits for the Bay are the central driver. Maryland has already upgraded 66 of its 67 major treatment plants to enhanced nutrient removal — work largely funded by the Bay Restoration Fund, which has invested about \$1.86 billion since 2004. Those plants cut more than 11.6 million pounds of nitrogen in 2024 alone, and maintaining that performance is an ongoing capital obligations³

How is Maryland funding lead service line and PFAS work?

Community water systems submitted lead inventories in October 2024 and must meet the federal Lead and Copper Rule Improvements by November 2027, while EPA's 2024 rule set 4 ppt limits for PFOA and PFOS¹⁰ Maryland's FFY2025 Drinking Water SRF plan set aside \$15.9 million specifically for PFAS and emerging contaminants, on top of base and IIJA supplemental funding¹⁷

Does the Public Service Commission set my utility's rates?

Only if you are an investor-owned system — the PSC regulates 22 private water and sewer companies serving about 11,000 residential customers. The majority of Maryland systems, including WSSC and municipal utilities like Baltimore, set rates through county councils, city boards, or their own commissions.¹⁵

What federal and state money is available right now?

Maryland's FFY2025 plans made roughly \$248 million available through the Clean Water SRF and about \$148 million through the Drinking Water SRF, each boosted by IIJA supplemental grants¹⁶ On top of that, EPA WIFIA has closed nearly \$600 million in loans for Baltimore and \$75 million for Howard County, and the Bay Restoration Fund continues to fund plant upgrades⁴3

How does Invizion help Maryland water utilities plan capital?

Invizion is scenario-based capital portfolio optimization for water utilities. It lets you model how a Bay nutrient mandate, a PFAS deadline, an SRF or WIFIA award, or a rate constraint reshuffles your whole project list, re-sequence the portfolio automatically, and keep a defensible record of every decision for your county council, the PSC, MDE, or your ratepayers. The best next step is a short first meeting to look at it against your own program.

REFERENCES

Sources

Every figure in this briefing is tied to a primary or authoritative source.

1. WSSC Water, "About Us" — ~1.9M residents, ~475,000 accounts, Montgomery & Prince George's counties, ~5,900 mi water / ~5,600 mi sewer main, 390 MGD treatment, est. 1918, largest in Maryland / 8th largest nationally, 2025. wsscwater.com
2. WSSC Water, "Adopted FYs 26–31 Capital Improvements Program" — \$4.878B six-year program; FY2026 capital \$715.5M, 2025. wsscwater.com
3. Maryland Department of the Environment, Bay Restoration Fund Advisory Committee Annual Status report — 66 of 67 major plants ENR-complete (June 30, 2025), ~\$1.86B wastewater fund and ~\$2.33B total since 2004, 11.67M lb N and 1.23M lb P reduced in CY2024; program page for the \$5/month fee (~\$100M/yr) and SB 320 (2004). [mde.maryland.gov \(report\)](https://mde.maryland.gov/report) · [mde.maryland.gov \(program\)](https://mde.maryland.gov/program)
4. U.S. EPA, WIFIA Closed Loans — Baltimore City DPW water \$193M, wastewater \$161M, stormwater \$42M (2021) and comprehensive wastewater \$202M (2018); Howard County Ellicott City Safe & Sound \$75M (2022). epa.gov
5. Baltimore City Department of Public Works, "Baltimore's Water System" — ~1.8M people served regionally, 3,800 mi water main, 67,500 valves, 23,000 hydrants, many mains 100+ years old; Loch Raven, Liberty & Prettyboy reservoirs, 2025. baltimorecity.gov
6. American Society of Civil Engineers, 2025 Maryland Infrastructure Report Card — drinking water grade C, 3,200+ public water systems serving ~5.5M residents, 40%+ of water mains past intended service life. infrastructurereportcard.org
7. WSSC Water, FY2026 Approved Budget — 9.5% average water & sewer rate increase (~\$8.53/month), \$1.8B total budget, 2025. wsscwater.com
8. Maryland Department of the Environment, Back River WWTP overview & compliance/enforcement — 100 MGD serving ~1.3M people (Dundalk, city-owned); MES directed to take charge March 27, 2022, consent order June 10, 2022, AG settlement Nov 2, 2023; excess nitrogen, phosphorus and solids. [mde.maryland.gov \(Back River\)](https://mde.maryland.gov/BackRiver) · [mde.maryland.gov \(enforcement\)](https://mde.maryland.gov/enforcement)
9. DC Water, "Blue Plains Advanced Wastewater Treatment Plant" — 384 MGD design (~300 MGD average, 780+ MGD peak), serves DC plus Montgomery & Prince George's (MD) and Fairfax & Loudoun (VA); largest advanced plant of its kind in the world. dcwater.com
10. Maryland Department of the Environment, Lead and Copper Rule / LCRI — initial service line inventory due Oct 16, 2024; LCRI baseline inventory and school/childcare monitoring by Nov 1, 2027. mde.maryland.gov
11. U.S. EPA, PFAS National Primary Drinking Water Regulation — enforceable limits of 4.0 ppt for PFOA and PFOS finalized April 10, 2024, with a hazard index for four additional PFAS; initial monitoring by 2027. epa.gov
12. Maryland Department of the Environment, PFAS Landing Page — statewide PFAS Action Plan (December 2023) and widespread testing of public water systems. mde.maryland.gov
13. Baltimore City DPW, Office of Water Advocacy & Customer Appeals — created by the Water Accountability & Equity Act; Water4All affordability program; hundreds of billing cases investigated annually. baltimorecity.gov
14. Baltimore City DPW, Sanitary Sewer Consent Decree Program — Modified Consent Decree entered Oct 6, 2017; Phase I targeted eliminating 83% of sanitary sewer overflow volume by Jan 1, 2021; Phase II through Dec 31, 2030. baltimorecity.gov
15. Maryland Public Service Commission, Regulated Utilities — Water — regulates 22 investor-owned water and sewer systems (~11,000 residential customers); most Maryland systems are municipal and unregulated by the PSC. psc.maryland.gov
16. Maryland Department of the Environment, Clean Water (Water Quality) SRF FFY2025 Intended Use Plan — \$38.371M base + \$59.581M IJA supplemental capitalization grants; ~\$248M total available. mde.maryland.gov
17. Maryland Department of the Environment, Drinking Water SRF FFY2025 Intended Use Plan — \$22.744M base + \$51.732M IJA supplemental + \$15.874M PFAS/emerging contaminants; ~\$147.9M total available. mde.maryland.gov

ABOUT INVIZION

Capital program optimization for utilities

Invizion is a purpose-built capital lifecycle management platform for water and wastewater utilities. It integrates budgeting, CIP, scenario analysis, and funding-source tracking in one system — so utilities can re-sequence a capital portfolio in a click and demonstrate audit-ready, defensible decisions to regulators, boards, and rating agencies.

See what a defensible Maryland capital plan looks like — book a 20-minute first meeting.

Book your first meeting →