MARYLAND DEPARTMENT OF THE ENVIRONMENT

Sustaining Our Success

Ensuring the long-term resilience and performance of Maryland's wastewater infrastructure

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Chesapeake Bay Commission Meeting

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WWTPs: Legislative History

From building treatment systems → sustaining performance → enforcing modern permits

Year	Policy / Legislation	Outcome & Impact
2004	Bay Restoration Fund ("Flush Fee")	Dedicated statewide funding; enabled Enhanced Nutrient Removal (ENR) at major plants.
2012	BRF Fee Increase	Adjusted to match real capital costs ($2.50 to $5/month); increase sunsets in 2030.
2021	Clean Water Commerce Act	Shifted to purchasing verified outcomes to complement infrastructure.
2022	HB 649: Extended Permits	Statutory limits on Administratively Extended permits; additional resources

WWTP Upgrades: The Engine of Progress

80% of the TN Reduction

SINCE 2010 (The Bay TMDL)

65% TN Reduction

Since 2010 (The Bay TMDL)

From 39% of the TN Load in 1985, to 24% in 2010 to 11% in 2024

$2.28B

INVESTED SINCE 2004

66 of 67

MAJOR PLANTS UPGRADED

Approaching the limits of current technology; performance must be sustained.

Statewide Outcomes vs. Local Impact

- 16 Major Plants
  Handle ~80% of daily sewage flow; drive regional Bay outcomes
- 4 Largest Plants
  Serve over half of Maryland's total population.
- 230 Municipal Systems
  "All plants matter" — protect local waterways and public health.

The BRF Crossroads: Securing the Next Decade

ANNUAL REVENUE

~$110 M

- **$21M/year** in current debt service
- Debt fully retired in **2030**
- Current law **cuts revenue 50%** in 2030
- **Opportunity to reinvest and maintain performance**

From Building ENR to Sustaining Reductions

- ENR Construction: Infrastructure build-out is largely complete
- Aging Assets: Systems now 15–20 years old; reaching end of design life.
- Shifted Risk: Vulnerability has moved from construction and start up to operations, assets, and personnel.
- New Mission: Resilience = Maintaining consistent high performance.

What’s Driving the Risk?

Aging Infrastructure

Leaking pipes allow stormwater to enter, undermining treatment efficiency.

Climate Stress

Climate-driven rainfall intensifies flow surges and operational demands.

Treatment Demands

Meeting nutrient limits while addressing emerging contaminants like PFAS.

System Complexity

Highly technical biological treatment requires deeper knowledge and oversight.

Capacity Limits

Smaller systems reaching hydraulic/nutrient caps, limiting local development.

The Cost and Workforce Reality

7:1

FUNDING GAP

- **Rising Costs:** Locally funded O&M and replacement
- **Workforce:** Critical shortage of technical operators
- **Funding Declining:** IIJA tapering, BRF sunset approaching

The Path Forward: What Maryland Is Doing

- O&M Support: ~$11M annually for all systems (helpful, but limited).
- ENR Refinement Program: Full-scale renewal of aging infrastructure.
- Stronger Oversight: Asset management and early detection systems.
- Workforce Investment: Inspections, compliance, and operator pipeline.
- Long-term Planning: Support for connections and consolidation.
- Innovation: Reducing upstream PFAS input and supporting water reuse.

Baltimore: A Regional Opportunity

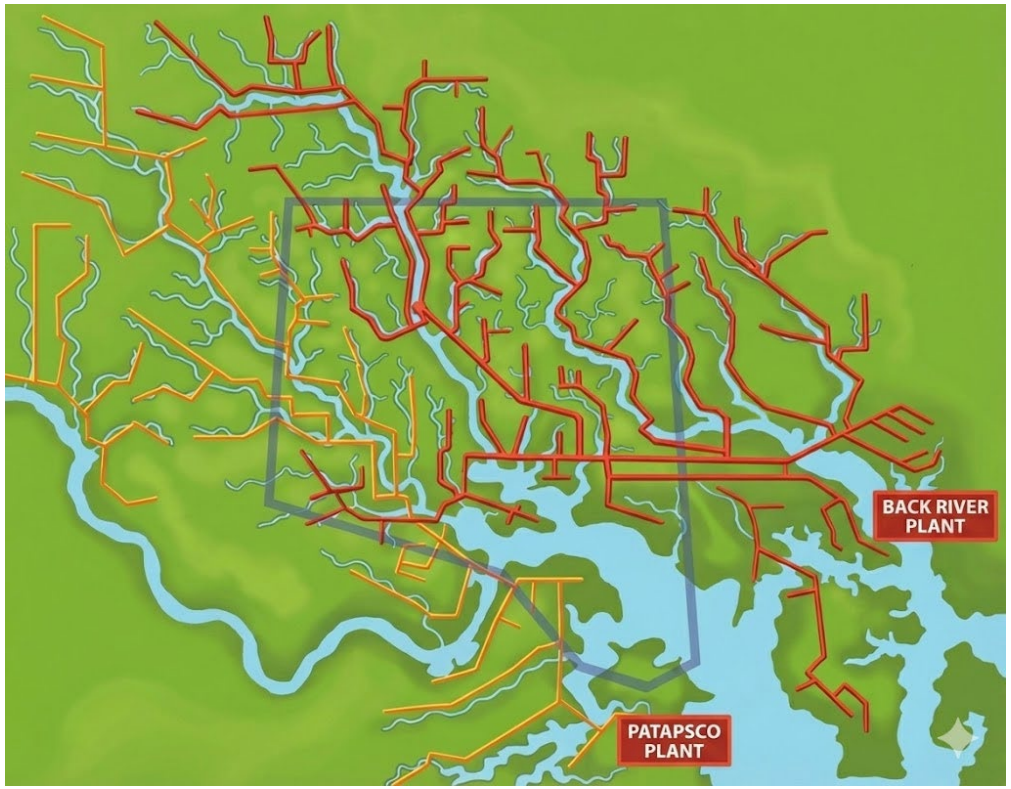

Image: Modified from Blue Water Baltimore

- Driven by HB 1509: 2023 legislation focused on regional modernization.
- Governance Review: 13-member workgroup examines options for oversight.
- Management Focus: Not about ownership, but reliable operational management.
- Regional System: Serving ~1.8M people across multiple jurisdictions.

Securing the Next 20 Years

Restoration to Resilience

Maintain sustainable nutrient performance

Protect Investments

Safeguard the $2.28B legacy through maintenance

Treatment Challenges

Address "forever chemicals" and climate stress

Invest in People

Support the workforce that runs the infrastructure.

Questions?

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