

MDE's Oversight of the State's Drinking Water Systems

Dramatic Understaffing and
Inadequate Inspections

Education, Health, and Environmental
Affairs Committee

January 17, 2022



Maryland Department of the Environment's (MDE) Water Supply Program (WSP)

- Mission to ensure safety of State's 3,300 public drinking water systems;
- Supply drinking water to 5.5 million Marylanders;
- Prevent public health crises like tragedy in Flint, Michigan.



CADMUS REPORT:

Commissioned by Environmental Protection Agency, May 2021

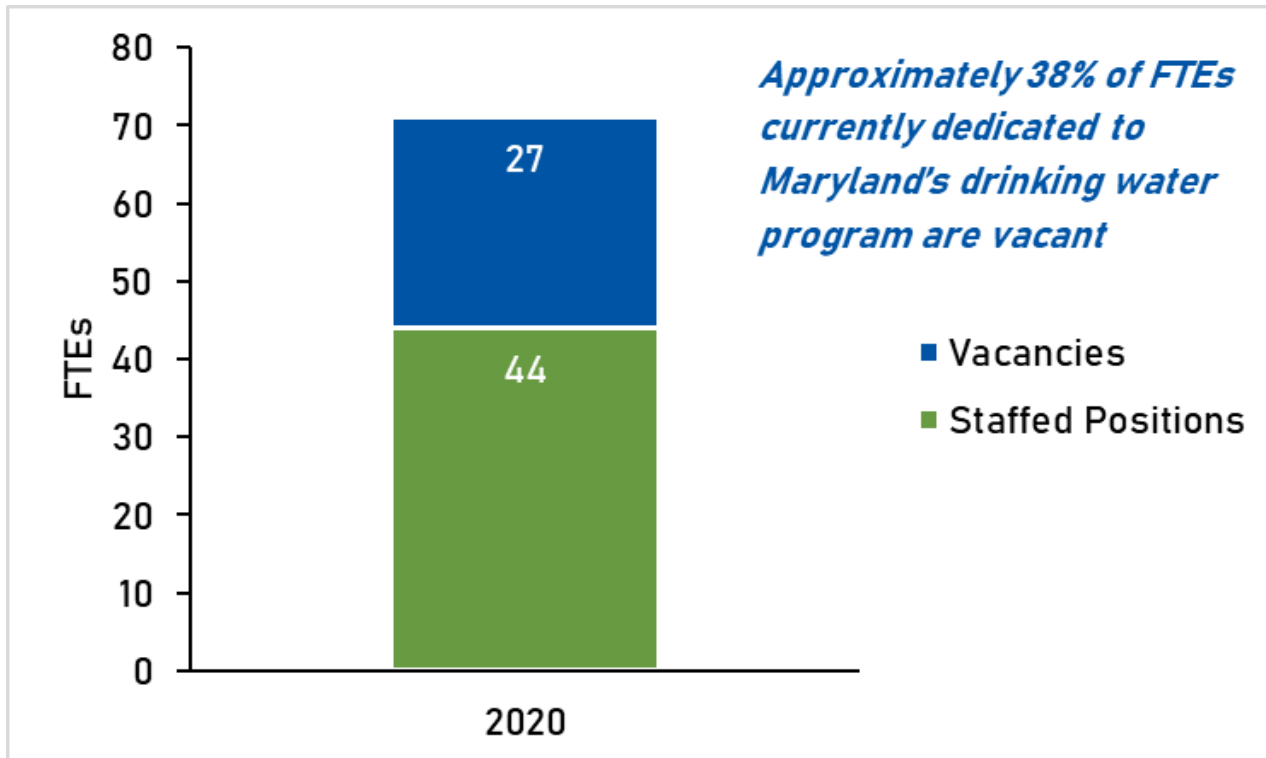
- Maryland once had a “robust drinking water program and was able to go above and beyond the minimum federal requirements . . .”
- By contrast, now “due to declining resources, increasing demands, and the need to make cutbacks . . . MDE may not be able to meet the minimum requirements needed to maintain primary enforcement responsibility.”
- MDE’s “ability to meet all demands and requirements is greatly compromised.”



CADMUS REPORT

- “Severe gap” between available staffing and funding and what’s necessary to run the program.
- **187%** more full-time employees (FTEs) needed; **93%** more funding.
- **27** vacancies out of **71** positions; 12 FTEs abolished, vacant positions unfilled, and hiring freezes perpetuated.

Current FTEs – Staffed and Vacant



CADMUS REPORT:

May 2021

Decline in WSP Staffing

| YEAR | FTEs | Comment |
|------|------|---|
| 2011 | 62 | |
| 2016 | 47 | |
| 2018 | 34* | |
| 2020 | 44 | Increase due primarily to transfer of boards and labs certification staff |

*Staffing decrease despite additional new responsibility over 800 transient non-community water systems, 350 new public water systems, oversight of lead testing in public schools, and emerging contaminants like PFAS, *Legionella*, harmful algal blooms.



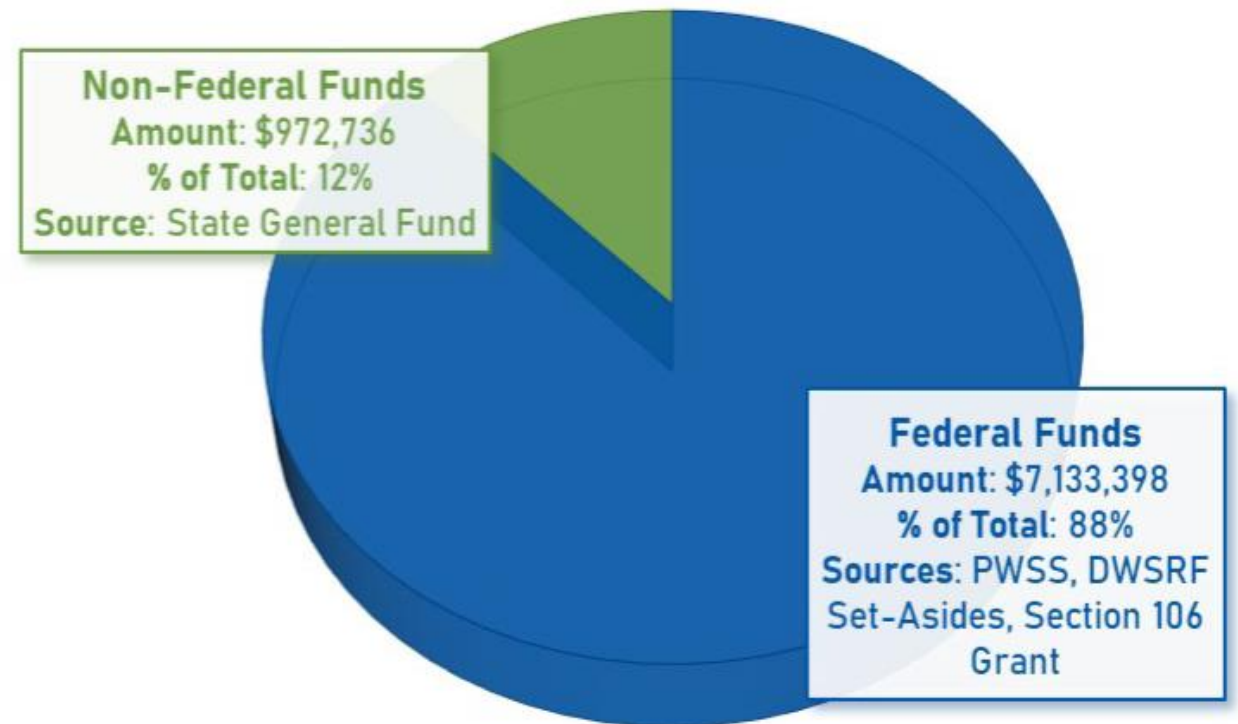
CADMUS REPORT:

May 2021



- WSP underfunding: \$8.1 million in annual funds: 85% federal and only 12% state.
- Average federal/state balance nationwide closer to 58% federal funds and 42% non-federal (state general fund and fee programs).
- In 2021, WSP needs **126 FTEs and \$15.7 million.**
- Represents **gap of 82 FTEs and \$7.8 million.**

Figure 6: Current Funding (Federal vs. Non-Federal Sources)



CADMUS REPORT:

Projected shortfalls over next decade

*FTE Gap (Available) refers to difference between available FTEs, include vacant positions, and FTEs projected to be needed.

*FTE Gap (Staffed) refers to difference between currently staffed FTEs, excluding vacant positions, and FTEs projected to be needed.



Figure 1: Gap in MDE Resources (2020-2029)

| Year | FTE Gap (Available) | FTE Gap (Staffed) | Funding Gap |
|------|---------------------|-------------------|---------------|
| 2020 | -50.1 | -77.1 | -\$6,916,773 |
| 2021 | -55.4 | -82.4 | -\$7,565,212 |
| 2022 | -53.8 | -80.8 | -\$7,369,986 |
| 2023 | -63.8 | -90.8 | -\$8,594,103 |
| 2024 | -70.2 | -97.2 | -\$9,381,871 |
| 2025 | -75.8 | -102.8 | -\$10,066,889 |
| 2026 | -72.7 | -99.7 | -\$9,685,094 |
| 2027 | -72.5 | -99.5 | -\$9,669,113 |
| 2028 | -74.6 | -101.6 | -\$9,923,738 |
| 2029 | -76.6 | -103.6 | -\$10,172,975 |

What are consequences of these staffing and funding shortfalls?

- WSP reports that its inspectors' workload is to perform **240 sanitary surveys** per cycle.*
- National average for an inspector's workload is **67**.
- EPA cites concern about a "loss in sanitary survey quality" due to MDE sanitary inspectors' "significantly greater" workload than the national average.
- Inspections must include sources, water treatment plants, storage and distribution systems, water quality test results, operating and maintenance procedures.
- Sanitary surveys are only **one part** of MDE inspectors' jobs.

*Sanitary survey frequency has declined from 12-18 months frequency to 3-5 years.



Effect on Maryland's public water systems' certified operators

- WSP's record of inspections obscures accurate picture of how many public water systems have certified operators.
- May also have contributed to decline in number of operators because decline in inspections precludes early identification and correction of non-compliance.



Effect on Maryland's public water systems' certified operators

- Only 72% of systems had certified operators in 2020, down from 84% in 2015.
- EPA concludes fully one-quarter of State's systems "are operating in violation of state and federal requirements."

| Maryland | Number of systems | | | Number of Systems with a Certified Operator | | | Percentage of systems with a Certified Operator | | |
|----------|-------------------|--------|-------|---|--------|-------|---|--------|-------|
| Year | CWS | NTNCWS | Total | CWS | NTNCWS | Total | CWS | NTNCWS | Total |
| 2001 | 503 | 568 | 1,071 | 402 | 225 | 627 | 79.9% | 39.6% | 58.5% |
| 2012 | 475 | 549 | 1,024 | 428 | 415 | 843 | 90.1% | 75.6% | 82.3% |
| | | | | | | | | | |
| 2013 | 473 | 540 | 1,013 | 432 | 405 | 837 | 91.3% | 75.0% | 82.6% |
| 2014 | 469 | 538 | 1,007 | 423 | 405 | 828 | 90.2% | 75.3% | 82.2% |
| 2015 | 469 | 539 | 1,008 | 427 | 418 | 845 | 91.0% | 77.6% | 83.8% |
| 2016 | 464 | 538 | 1,002 | 422 | 405 | 827 | 90.9% | 75.3% | 82.5% |
| 2017 | 466 | 537 | 1,003 | 419 | 397 | 816 | 89.9% | 73.9% | 81.4% |
| 2018 | 464 | 546 | 1,010 | 405 | 367 | 772 | 87.3% | 67.2% | 76.4% |
| 2019 | 464 | 543 | 1,007 | 417 | 363 | 780 | 89.9% | 66.8% | 77.4% |
| 2020 | 461 | 534 | 995 | 408 | 309 | 717 | 88.5% | 57.9% | 72.1 |



EPA DIRECTIVE:

MDE must develop a resource investment plan – to include “establishing a lower public water system to field staff ratio” – for EPA review and approval by October 2021.



Sources:

- *Analysis of Maryland's Drinking Water Program Resources and Needs*, May 2021, CADMUS, prepared for Maryland Department of the Environment and the U.S. Environmental Protection Agency, Region III (*CADMUS Report*).
- *Annual Review of the Public Water Supply Supervision Program for the State of Maryland*, January 1, 2020 – December 31, 2020, U.S. Environmental Protection Agency Region III (*EPA Report*).
- *Report to Governor: Capacity Development for Maryland Public Drinking Water Systems, Calendar Years 2017-2019*.
- Md. Code Regs. 26.04.01.11-3 (2021).

