

At a Glance

S. 1507, PFAS Release Disclosure and Protection Act of 2019

As reported by the Senate Committee on Environment and Public Works on June 19, 2019

By Fiscal Year, Millions of Dollars	2020	2020-2024	2020-2029
Direct Spending (Outlays)	0	0	0
Revenues	*	-9	-52
Increase or Decrease (-) in the Deficit	0	9	52
Spending Subject to Appropriation (Outlays)	46	715	not estimated
Statutory pay-as-you-go procedures apply?	Yes	Mandate Effects	
Increases on-budget deficits in any of the four consecutive 10-year periods beginning in 2030?	< \$5 billion	Contains intergovernmental mandate?	Yes, Over Threshold
		Contains private-sector mandate?	Yes, Over Threshold

* = between -\$500,000 and zero.

The bill would

- Authorize appropriations for grants to states to address “emerging contaminants” in drinking water
- Direct the U.S. Geological Survey (USGS) to set concentration standards for perfluoroalkyl and polyfluoroalkyl substances (PFAS) in water
- Direct the Environmental Protection Agency (EPA) to study, monitor, and regulate PFAS and emerging contaminants in drinking water and to issue rules and guidance
- Establish a multiagency research initiative regarding emerging contaminants
- Impose intergovernmental mandates by requiring public water systems to meet new drinking water standards for PFAS and private-sector mandates by requiring facilities that use or manufacture PFAS to comply with new reporting requirements

Estimated budgetary effects would primarily stem from

- Authorizations of appropriations for EPA and USGS
- Additional costs for EPA to study and report on PFAS standards, participate in a working group and research initiative, and issue new regulations
- Reductions in federal revenues arising from increased issuance of tax-exempt bonds

Areas of significant uncertainty include

- Projecting the costs of testing and analysis of toxic compounds in water
- Estimating the number of compounds that EPA would regulate

Detailed estimate begins on the next page.



Bill Summary

S. 1507 would direct the Environmental Protection Agency (EPA) to regulate a group of chemical compounds, the perfluoroalkyl and polyfluoroalkyl substances (PFAS).¹ The bill also would authorize the appropriation of \$100 million annually through 2024 for EPA to make grants to states to address what are termed emerging contaminants of drinking water (compounds that are suspected of affecting human health but that are not yet covered under primary drinking water standards). S. 1507 would establish an interagency working group and research initiative on such contaminants and direct EPA to provide additional assistance to states to address their presence in drinking water.

Estimated Federal Cost

The estimated budgetary effect of S. 1507 is shown in Table 1. The costs of the legislation fall within budget function 300 (natural resources and environment).

Table 1.
Estimated Budgetary Effects of S. 1507

	By Fiscal Year, Millions of Dollars										2020-2024	2020-2029
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		
Decreases in Revenues												
Estimated Revenues	*	*	-1	-3	-5	-7	-8	-9	-10	-10	-9	-52
Increases in Spending Subject to Appropriation												
Estimated Authorization	149	194	193	193	153	n.e.	n.e.	n.e.	n.e.	n.e.	882	n.e.
Estimated Outlays	46	126	181	193	169	n.e.	n.e.	n.e.	n.e.	n.e.	715	n.e.

Sources: Congressional Budget Office; Staff of the Joint Committee on Taxation.

Components may not sum to totals because of rounding; n.e. = not estimated; * = between -\$500,000 and zero.

Basis of Estimate

For this estimate, CBO assumes that S. 1507 will be enacted near the end of 2019 and that the authorized and estimated amounts will be appropriated for each fiscal year. Estimated outlays are based on historical patterns for similar projects and programs.

Revenues

The staff of the Joint Committee on Taxation (JCT) expects that some of the funds authorized to be appropriated by S. 1507 for grants to state revolving funds would be used by

1. PFAS constitute a group of hundreds of synthetic products manufactured and used by a variety of industries and in many consumer products. PFAS tend to persist in the environment and in the human body. See Environmental Protection Agency, “PFOA, PFOS and Other PFASs, EPA Basic Information on PFAS” (accessed October 23, 2019) www.epa.gov/pfas/basic-information-pfas.



state and local governments to leverage additional funds by issuing tax-exempt bonds. JCT estimates that the issuance of additional tax-exempt bonds would reduce federal revenues by \$52 million over the 2019-2029 period.

Spending Subject to Appropriation

S. 1507 would specifically authorize the appropriation of \$695 million over the 2020-2024 period. Assuming appropriation of those specific amounts plus estimated amounts for other required activities, CBO estimates that the bill would cost \$715 million over the same period (see Table 2).

Table 2.
Estimated Increases in Spending Subject to Appropriation Under S. 1507

	By Fiscal Year, Millions of Dollars					2020-2024
	2020	2021	2022	2023	2024	
Emerging-Contaminant Grants						
Authorization	100	100	100	100	100	500
Estimated Outlays	10	50	90	100	100	350
USGS Studies of PFAS						
Authorization	5	10	10	10	10	45
Estimated Outlays	4	9	10	10	10	43
EPA Technical Assistance						
Authorization	15	15	15	15	15	75
Estimated Outlays	9	14	15	15	15	68
PFAS Research at EPA						
Authorization	15	15	15	15	15	75
Estimated Outlays	12	15	15	15	15	72
Testing of Public Water Systems						
Estimated Authorization	5	45	45	45	5	145
Estimated Outlays	3	29	43	45	21	141
Other Costs to EPA						
Estimated Authorization	8	8	7	7	7	37
Estimated Outlays	7	8	7	7	7	36
Costs to Other Agencies						
Estimated Authorization	1	1	1	1	1	5
Estimated Outlays	1	1	1	1	1	5
Total Changes						
Estimated Authorization	149	194	193	193	153	882
Estimated Outlays	46	126	181	193	169	715

USGS = U.S. Geological Survey; PFAS = perfluoroalkyl and polyfluoroalkyl substances; EPA = Environmental Protection Agency.

Provisions With Specified Authorizations. S. 1507 would authorize appropriations totaling \$695 million over the 2020-2024 period and CBO estimates that implementing those provisions would cost \$533 million over that same period and about \$160 million after 2024.



Emerging-Contaminant Grants. Section 204 would authorize the appropriation of \$100 million annually through 2024 for grants to states to address emerging contaminants in drinking water. Amounts would be awarded through the states' existing revolving funds. Using information from EPA, CBO estimates that implementing this provision would cost \$350 million over the 2020-2024 period, and \$150 million after 2024.

USGS Studies of PFAS. Title III would authorize the appropriation of \$5 million in 2020 and \$10 million annually from 2021 through 2024 for the U.S. Geological Survey to study PFAS contamination of drinking water. CBO estimates implementing the provision would cost \$43 million over the 2020-2024 period.

EPA Technical Assistance. Section 402 would authorize the appropriation of \$15 million annually through 2024 for EPA to develop a program to provide technical assistance to states for testing and analysis of emerging water contaminants and to create a public database of testing resources. CBO estimates that implementing the provision would cost \$68 million over the 2020-2024 period.

PFAS Research at EPA. Section 505 would authorize the appropriation of \$15 million annually through 2024 for EPA to study the effects of PFAS, establish research and regulatory priorities, develop new tools to identify those compounds in drinking water, and evaluate approaches to remediation. CBO estimates that implementing the provision would cost \$72 million over the 2020-2024 period.

Provisions With Estimated Authorizations. CBO expects that EPA and other federal agencies would need additional appropriations to carry out other requirements in the bill. In total, CBO estimates that implementing those provisions would cost \$182 million over the 2020-2024 period.

Testing of Public Water Systems. Section 202 would require EPA to pay for sampling and monitoring public water systems for PFAS compounds that are not now subject to federal drinking water regulations. Under the bill, water systems serving at least 3,300 people would be subject to monitoring requirements; systems serving fewer than that number would be subject to sampling only. Using information from EPA and the private sector, CBO estimates that about 67,000 local water systems would be affected and that the costs of monitoring and analyzing the results would total \$141 million over the 2020-2024 period. Most of the cost would be attributed to the approximately 10,000 water systems that serve at least 3,300 people.

Other Costs to EPA. Section 402 would direct EPA to review federal efforts to identify, monitor, and treat emerging contaminants of drinking water and develop a plan to improve federal efforts in those areas. That section also would direct EPA and the Department of Health and Human Services to form a working group to analyze the health effects of certain contaminants in drinking water. The Office of Science and Technology Policy also would be



required to establish a national research program on emerging contaminants that would require several federal agencies to issue grants. Using information from EPA and the affected agencies, CBO estimates that implementing those provisions would require EPA to hire about 20 additional employees, at a cost of \$14 million over the 2020-2024 period.

Several other provisions in S. 1507 would require EPA to conduct research, undertake rulemaking, and issue guidance. For example, EPA would be required to add several substances to those listed on the Toxics Release Inventory, a database that provides information about toxic releases reported by certain industries and federal facilities.² EPA also would be directed to issue a national primary drinking water regulation for certain PFAS that would create a legally enforceable standard limiting the concentration of those substances in drinking water. In total, CBO estimates that implementing those provisions would cost EPA \$22 million over the 2020-2024 period.

Costs to Other Agencies. CBO estimates that it would cost an additional \$5 million over the same period for several federal agencies to participate in the working groups and research initiatives.

Uncertainty

This cost estimate has two main areas of uncertainty:

- The costs of testing and monitoring for PFAS in public water systems, to be paid by EPA, could be higher or lower than CBO estimates, depending on the number of substances that qualify for the monitoring requirement and differences in costs by substance and location. Costs could be lower than CBO estimates because EPA would be granted the authority to waive monitoring requirements in certain circumstances.
- Several provisions of the bill dictate EPA's actions (and costs) on the basis of outcomes from monitoring, testing, and assessing the toxicity of PFAS. As a result, EPA's costs to issue regulations could be higher or lower than CBO estimates.

Pay-As-You-Go Considerations

The Statutory Pay-As-You-Go Act of 2010 establishes budget-reporting and enforcement procedures for legislation affecting direct spending or revenues. The net changes in revenues that are subject to those procedures are shown in Table 3.

2. For more information, see Environmental Protection Agency, Toxic Release Inventory (TRI) Program, "What Is the Toxics Release Inventory" (accessed November 20, 2019), <https://go.usa.gov/xpXrx>.



Table 3.
CBO’s Estimate of the Statutory Pay-As-You-Go Effects of S. 1507

	By Fiscal Year, Millions of Dollars										2020-2024	2020-2029
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		
	Increase in the Deficit											
Pay-As-You-Go Effect	0	0	1	3	5	7	8	9	10	10	9	52

Increase in Long-Term Deficits

CBO and JCT estimate that enacting S. 1507 would not increase on-budget deficits by more than \$5 billion in any of the four consecutive 10-year periods beginning in 2030.

Mandates

S. 1507 contains intergovernmental and private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA). CBO estimates that the aggregate cost of complying with the mandates would exceed the annual thresholds established in UMRA for intergovernmental and private-sector mandates of \$82 million and \$164 million, respectively, in 2019 (adjusted annually for inflation).

Mandate That Applies Both to Public and to Private Entities

By requiring EPA to promulgate new regulations to establish limits on concentrations of PFAS in drinking water, section 201 would impose a mandate on owners and operators of public water systems that are regulated by the Safe Drinking Water Act. S. 1507 would require all water systems, regardless of ownership, to meet standards for water testing, monitoring, treatment, and proper disposal of waste streams generated by treatment technologies. Compliance would require capital expenditures and would create continuing operation and maintenance costs. (Approximately 32,000 water systems owned and operated by public entities serve nearly 90 percent of the U.S. population; about 35,000 smaller systems, many serving fewer than 500 people, are privately owned.)

Section 202 would require water systems to test and monitor water for the presence of additional PFAS. The bill would require EPA to cover reasonable costs for those activities. Funds would be allocated first to water systems serving more than 10,000 people. If any federal funds remained, water systems serving fewer than 10,000 but more than 3,300 people, and a representative group of even smaller systems, also would receive funds to cover monitoring costs.

The new regulations have not been established by EPA; therefore, CBO has no basis on which to estimate the extent of investments that would be needed for compliance. However, because more than 67,000 public water systems would be subject to the new regulations,



CBO expects that the capital and operating costs for monitoring, treating, and removing PFAS from drinking water could exceed several billion dollars in the first five years the mandate would be in effect.

Mandates That Apply to Private Entities Only

Other provisions of the bill would impose new requirements on industrial facilities that use or manufacture PFAS. The type and number of substances that would be regulated is widespread but unknown, as is the number of industrial facilities using, processing, manufacturing, or importing those compounds. Therefore, CBO cannot estimate the cost of compliance for the affected private entities.

- Section 101 would impose record-keeping and reporting requirements on industrial facilities that use, process, manufacture, or import a certain group of PFAS, by adding those substances to the Toxics Release Inventory.
- Section 502 would require industrial facilities that have manufactured two types of PFAS in any year since 2006 to meet certain reporting requirements, starting in 2023.
- Section 503 would require industrial enterprises to notify EPA 90 days before using, processing, manufacturing, or importing certain PFAS.

Previous CBO Estimate

On August 23, 2019, CBO transmitted a [cost estimate for S. 1790](#), the National Defense Authorization Act for Fiscal Year 2020, as passed by the Senate. Title LXVII of S. 1790 is similar to S. 1507; however, S. 1790 includes provisions that would preclude the use of grant funds to pay or provide security for a tax-exempt bond. CBO's estimate of the costs of S. 1790 reflects that difference.

Estimate Prepared By

Federal Costs: Stephen Rabent

Federal Revenues: Staff of the Joint Committee on Taxation

Mandates: Lilia Ledezma

Estimate Reviewed By

Kim P. Cawley
Chief, Natural and Physical Resources Cost Estimates Unit

Susan Willie
Chief, Mandates Unit

H. Samuel Papenfuss
Deputy Assistant Director for Budget Analysis

Theresa Gullo
Assistant Director for Budget Analysis