

LEGISLATIVE FISCAL ESTIMATE

SENATE, No. 278

STATE OF NEW JERSEY

220th LEGISLATURE

DATED: NOVEMBER 13, 2023

SUMMARY

- Synopsis:** Requires water purveyors to conduct, and report to DEP, water loss audits.
- Type of Impact:** Annual expenditure increase to the State and affected local governments. Potential expenditure decrease to the State and local governments. Potential revenue increase to the State and local governments.
- Agencies Affected:** Department of Environmental Protection and certain local governments.

Office of Legislative Services Estimate

Fiscal Impact	Year 1-3	Year 4-5	Year 6-15
Cumulative State and Local Water Purveyor Expenditure Increase	Up to \$29.4 million	Up to \$40.8 million	0
Potential Annual State & Local Water Purveyor Expenditure Decrease	0	0	Indeterminate
Potential Annual State & Local Water Purveyor Revenue Increase	0	0	Indeterminate
Annual State Expenditure Increase	\$200,000	\$200,000	\$200,000

- The Office of Legislative Services (OLS) estimates that the preparation and delivery of the annual water loss audit reports by local governments and the State will cost collectively up to \$970,000 annually. The OLS also assumes that the Department of Environmental Protection will require at least two additional staff to execute these requirements of the bill, which would cost the State approximately \$200,000 annually.
- The OLS notes that public water systems may be required to develop and implement water loss reduction programs and estimates the total costs would be up to \$65.2 million for locally owned and \$200,000 for State-owned public water systems over a five-year period.
- The OLS further notes these water loss reduction programs would likely result in expenditure decreases and revenue increases for water purveyors over the long term, which could potentially offset the costs.

BILL DESCRIPTION

This bill would amend and supplement the Water Supply Management Act to require certain water purveyors to conduct annual water loss audits.

Specifically, beginning no later than 24 months after the bill is enacted into law, every water purveyor serving at least 3,300 individuals would be required to annually submit a water loss audit to the Department of Environmental Protection. The bill would direct the department, within 18 months after the bill is enacted into law, to adopt regulations concerning the conduct and validation of water loss audits based on the most current edition of the American Water Works Association's "Water Audits and Loss Control Programs, Manual M36" and its associated Free Water Audit Software. The regulations would include a requirement to notify the water purveyor's customers of the water loss reported in the water audit on or with the water purveyor's next annual consumer confidence report or on or with the next bill the customer receives after the water audit is submitted. In addition, public water utilities regulated by the Board of Public Utilities would be required to provide the board with a completed and validated water loss audit.

The bill would also require the Department of Environmental Protection to adopt, no sooner than 36 months and no later than 48 months after the date of enactment of the bill into law, regulations: (1) specifying a minimum data validity score or a specific level of yearly improvement in the data validity score of future annual water loss audit reports; and (2) setting forth performance standards to be met by a water purveyor concerning the volume of water losses.

The bill would require the Department of Environmental Protection, in consultation with the New Jersey Infrastructure Bank, to establish, in each of the two fiscal years beginning after the date of enactment of the bill, a grant program to assist water purveyors in procuring water loss audit report validation under the bill, within the limits of funds appropriated or made available to the department.

The bill would also require the Department of Environmental Protection to provide technical assistance to water purveyors concerning: (1) the American Water Works Association's "Water Audits and Loss Control Programs, Manual M36" methodology, data tracking, and use of the associated Free Water Audit Software; and (2) available water loss reduction programs, including, but not limited to, metering techniques including testing, repair, and replacement, pressure management techniques, condition-based assessment techniques for transmission and distribution pipelines, and active leak detection. The department would establish a technical advisory committee to assist with the implementation of the bill.

Finally, the bill would require a water purveyor that is subject to the requirements of the Water Quality Accountability Act to consider the findings of its annual water loss audit reports when determining which projects shall receive highest priority in its asset management plan required pursuant to State law.

FISCAL ANALYSIS

EXECUTIVE BRANCH

None received.

OFFICE OF LEGISLATIVE SERVICES

The OLS estimates that the preparation and delivery of the annual water loss audit report to the Department of Environmental Protection will cost public water systems collectively

approximately up to \$970,000 annually. In addition, the OLS notes that future regulations will be adopted by the department specifying a minimum data validity score or specific level of yearly improvement for future water loss audit reports and performance standards for the volume of water losses. Water purveyors may therefore be required to develop and implement water loss reduction programs. The OLS estimates the total cost to local governments for water loss reduction programs would be approximately \$65.2 million over a five-year period and the total cost to the State government would be approximately \$200,000 over a five-year period. The OLS also assumes that the department will require at least two additional staff to execute these requirements of the bill, which would cost the State approximately \$200,000 annually.

Costs to Public Water Purveyors

The OLS notes that, according to Department of Environmental Protection data, there are 192 public water systems owned by local governments, and two public water systems owned by the State (Stockton University – Main Campus and the New Jersey State Prison – Bayside) that would be covered under the provisions of the bill. The following paragraphs will discuss: (a) the cost of producing an annual water loss audit report; (b) the cost of performing a “level one validation;” (c) the cost of water loss reduction programs; and (d) the potential savings and revenue gains from the implementation of certain water loss reduction programs and improved billing practices.

(a) Annual Water Loss Audit Report Cost

The OLS estimates that the costs to prepare the annual water loss audit report will involve a small investment of time by existing staff. The Natural Resources Defense Council notes that audits using the American Water Works Association Manual, data tracking, and Free Water Audit Software are typically performed with modest investment of time by existing staff. For example, utilities regulated by the Delaware River Basin Commission reported that, even though most existing staff were unfamiliar with the American Water Works Association audit methodology, most water purveyors completed the audit in one to three days without outside help. For a water purveyor already familiar with the methodology and with good internal data collection and reporting systems, an annual audit can be completed by a single staff member in as little as two hours.

(b) Level One Validation Costs

The bill requires each annual water loss audit report to include a “level one validation” which, in most cases, will be performed by a third party consultant who has the technical qualifications required by the Department of Environmental Protection. Based on testimony the Natural Resources Defense Council provided to the Assembly Environment and Solid Waste Committee on a substantively similar bill in 2017, independent third party level one validation by a qualified third party consultant requires approximately 10 to 20 hours, and will cost between \$2,500 and \$5,000 for each public water system. This yields a total Statewide cost of up to \$960,000 for local governments and \$10,000 for the State, annually. Depending on the regulations for consultants established by the department, a public water system may be able to use existing staff to fulfill this requirement of the bill.

(c) Water Loss Reduction Program Costs

If the Department of Environmental Protection required water loss reduction programs, the OLS estimates the total cost to local governments would be approximately \$65.2 million over a five-year period and the total cost to the State government would be approximately \$200,000 over a five-year period. Although the bill does not require that any remedial actions be taken, the OLS notes that bill requires the department to adopt regulations specifying a minimum data

validity score or specific level of yearly improvement for future water loss audit reports and performance standards for the volume of water losses. Water purveyors may therefore be required to develop and implement water loss reduction programs. Water loss reduction programs include metering techniques, pressure management techniques, condition-based assessment techniques, and active leak detection. It is difficult to generalize about the costs associated with each water loss reduction program onto a water purveyor because they are dependent on: (a) the size and condition of the public water system; (b) the extent of the follow-up programs; and (c) whether or not consultants are used. Each water loss reduction program would be implemented incrementally over the course of several years. The table below shows the total costs of water loss reduction programs if conducted over a five-year period. The OLS estimates that the implementation of water loss reduction programs would cost a small-sized water purveyor approximately \$100,000, a medium-sized water purveyor \$300,000, and a large-sized water purveyor \$1.5 million.

Cost Impact of Water Loss Reduction Program Over 5 Years						
	Year 1	Year 2	Year 3	Year 4	Year 5	<i>Total Cost</i>
Small PWS	\$10,000	\$15,000	\$20,000	\$25,000	\$30,000	<i>\$100,000</i>
Medium PWS	\$20,000	\$40,000	\$60,000	\$80,000	\$100,000	<i>\$300,000</i>
Large PWS	\$100,000	\$200,000	\$300,000	\$400,000	\$500,000	<i>\$1,500,000</i>

As mentioned above, there are 192 locally-owned public water systems and two State-owned public water systems covered under the bill. In performing the analysis below, the OLS makes the following simplifying assumptions: (a) each public water system will follow a five-year water loss reduction program implementation plan; (b) they will not incur any additional costs; (c) there are no existing water loss reduction programs currently operating in the State; and (d) small water systems are those that serve fewer than 10,000 people, medium water systems are those that serve between 10,000 and 50,000 people and large water systems are those that serve more than 50,000 people. This means that there are 70 locally-owned and two State-owned small public water systems, 104 locally owned medium public water systems, and 18 locally-owned large public water systems covered under the bill. Multiplying these numbers by the cost estimates above yields a cost of approximately \$65.2 million to local governments and \$200,000 to the State over a five-year period. The OLS notes that these costs may be mitigated if water purveyors already have some of the aforementioned water loss reduction programs in place.

(d) Water Purveyor Savings and Revenues

The OLS notes that with implementation of the aforementioned water loss programs and accompanying cost investment, water purveyors could potentially decrease expenditures by up to \$10 million annually. According to the United States Environmental Protection Agency, up to 75 percent of water loss is recoverable. According to information the Natural Resources Defense Council included in its 2017 testimony on a substantively similar bill, in New Jersey, 130 million gallons of treated drinking water are lost each day. Of this, over 50 million gallons per day of water losses are attributed to leakage, valued at \$10 million annually. In addition, the OLS notes that based on information in the Joint Legislative Task Force on Drinking Water Infrastructure’s January 2018 final report, water purveyors could potentially gain an additional \$12.5 million in revenue annually through improved water measurement and billing practices for unauthorized use and under-billing. These estimates included privately-owned public water systems as well, so the figures for public-owned systems would be reduced.

Costs to the Department of Environmental Protection

The OLS notes that the bill requires the Department of Environmental Protection to adopt regulations concerning water loss audits based on the most current edition of the American Water Works Association Manual and to update these regulations no later than one year after the release of any subsequent edition of the manual. After reviewing the annual “level one” validated water loss audits submitted by water purveyors, the department is required to adopt regulations specifying a minimum data validity score or specific level of yearly improvement for future water loss audit reports and the performance standards for water loss. The bill also requires the department to provide technical assistance to water purveyors for: (a) the American Water Works Association Manual methodology, data tracking, and Water Audit Software; and (b) the development and implementation of water loss reduction programs. Under the bill, the department, in consultation with the New Jersey Infrastructure Bank, is required to establish a grant program to assist water purveyors in procuring water loss report validation. The OLS estimates that the department will require at least two additional staff to execute these requirements of the bill, which would cost the State approximately \$200,000 annually.

In addition, the Department of Environmental Protection is required to post the validated water loss audit reports on its website in a manner that allows for comparisons between water purveyors. The OLS is unfamiliar with the capabilities of the department to develop the software necessary to implement these requirements of the bill, and thus cannot provide a precise cost estimate for its development.

Section: Environment, Agriculture, Energy, and Natural Resources

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This legislative fiscal estimate has been produced by the Office of Legislative Services due to the failure of the Executive Branch to respond to our request for a fiscal note.

This fiscal estimate has been prepared pursuant to P.L.1980, c.67 (C.52:13B-6 et seq.).