

## **New Jersey**

Water loss is a particularly important issue in New Jersey, where approximately 89% of the population is served by public water suppliers. The US Geological Survey (USGS) estimates that in 2015 (the most recent year available), New Jersey's public water suppliers withdrew an average of about 1,175.42 million gallons of water per day for treatment and distribution to customers. Those public water suppliers face enormous challenges when it comes to replacing and repairing their systems. The U.S. Environmental Protection Agency (EPA) recently found a 20-year capital improvement need of more than \$8.58 billion for New Jersey's water systems to continue to provide safe drinking water.

An analysis using water loss audit data from all New Jersey utilities regulated by the Delaware River Basin Commission (which requires such annual audits using the AWWA methodology), and extrapolating the results statewide, estimated that the state's utilities lose 130 million gallons of treated drinking water each day from leaky distribution pipes. Of this amount, 50 million gallons per day, valued at \$10 million per year, are likely to be cost-effective for utilities to save. That latter amount is equal to the water use of about 700,000 New Jersey residents, or a population 2.5 times the size of Newark. The analysis found that an additional \$12.5 million per year in lost revenue, identifiable as "apparent loss," is likely to be cost-effective for utilities to recover through improved water measurement and billing practices.

A 2017 report produced by Rutgers University for the New Jersey Department of Environmental Protection, which assessed the state's future water supply needs, concluded that "water losses will play a major role in future water delivery requirements; an aggressive program to minimize water losses can offset a large population increase." That report also assessed water loss data from DRBC-regulated utilities, in combination with data from a subset of other utilities in the state (only some of which used the AWWA audit method), to estimate the percentages of unaccounted-for water and/or non-revenue water for utilities of various sizes in various regions of the state.

## **State Requirements**

New Jersey does not have a requirement for water utilities to submit annual water audit data. The agency with statewide jurisdiction over water loss reporting is the New Jersey Department of Environmental Protection (DEP). DEP's requirements are described below. Additionally, the New Jersey Board of Public Utilities (BPU) regulates approximately 30 private water companies that operate close to one hundred systems in the state. BPU does not have a requirement for water utilities to submit annual water audit data.

Under DEP rules, water loss data is to be included in a report that must be completed by water utilities filing a new or modified water allocation permit application. Allocation permits last ten years and then must be renewed. A "Water Conservation and Drought Management Plan Report" must also be updated and submitted every two years. Additionally, DEP states in its most recent Water Supply Plan that "in April 2017, the NJDEP started to electronically collect this water loss data annually from systems

who are interconnected and serve at least 1,000 people.” The report format includes a rudimentary water audit worksheet to calculate “unaccounted for water,” defined as the difference between the amount of water entering the distribution system and the amount of water billed. The AWWA methodology is optional and DEP suggests utilities include in their reports several of the key performance indicators of the AWWA methodology.

Using the reported data, DEP is required by law to make an “annual enumeration” of water loss by water systems serving greater than 500 persons that have “unaccounted for water” greater than 15%, triggering potential compliance action against such utilities. Actions might include directing revised water conservation plans to act on reducing losses, more frequent plan submission, and/or set a time frame for reduction of losses to occur.

The state’s Water Supply Plan, issued in 2017, states that: “Though NJDEP currently lacks the appropriate regulations to require AWWA audits be submitted, the DEP recognizes the value of AWWA audits and plans to require them in the future through regulatory amendments.” It further states that NJDEP’s existing electronic portal for annual water loss reporting “will be able to be used in the future to collect key AWWA audit information, allowing for a smoother transition to the implementation and analysis of the [AWWA] audits.”

On July 21, 2017, the state enacted the Water Quality Accountability Act, which requires water utilities to adopt and implement asset management plans by April 2019. These plans are intended to identify and prioritize needed repairs and replacement of aging infrastructure. DEP plans to do a rulemaking to identify the minimum necessary elements of an asset management plan, which could include water loss audits. In late 2017, DEP initiated stakeholder outreach to utilities and others concerning this rulemaking, but has not proceeded with further stakeholder engagement as of June 2018.

On January 16, 2018, the state’s Joint Legislative Task Force on Drinking Water Infrastructure released a set of recommendations on water loss, which proposed creating legislation that would require:

- all water utilities to submit annual or biennial water loss audits using the AWWA methodology, with independent validation;
- DEP to post audit results publicly, develop performance benchmarks for utilities to reduce water loss, and provide technical assistance to utilities for both the water loss audit process and the implementation of strategies to reduce water loss; and
- utilities to directly notify their customers of the water loss reported in the audit.

The Task Force also recommended that the Legislature and the New Jersey Environmental Infrastructure Financing Program (NJEIFP) should establish a program, and allocate funds, to support water audit training and validation. The Task Force’s summary and recommendations on New Jersey water infrastructure can be found in this blog post: <https://www.nrdc.org/experts/larry-levine/nj-legislature-weighs-clean-water-governor-next>

These Task Force recommendations are incorporated into [Assembly Bill No. 2696](#) and [Senate Bill No. 1742](#), which were introduced in February 2018. These bills are now pending.

### **Delaware River Basin Commission Requirements**

While the state of New Jersey has not adopted standardized water loss auditing requirements, several of the state's major water systems, including Trenton, Camden, Pennsauken, Vineland, and New Jersey American Water, have prepared and submitted annual water audits under regulations of the Delaware River Basin Commission (DRBC), a regional agency formed by interstate compact and made up of representatives of Delaware, New Jersey, New York, Pennsylvania, and the US Government. In 2009, the DRBC added a requirement to its Water Code (section 2.1.8) that all utilities located in the Delaware River Basin submit annual water audits beginning in 2012 using the AWWA Free Water Audit Software.

U.S. Geological Survey's "Estimated Use of Water in the United States County-Level Data for 2015", September 28, 2017- <https://www.sciencebase.gov/catalog/item/59a96d18e4b07e1a023db323>

EPA's "Drinking Water Infrastructure Needs Survey and Assessment, Sixth Report to Congress", March 2018 - [https://www.epa.gov/sites/production/files/2018-03/documents/sixth\\_drinking\\_water\\_infrastructure\\_needs\\_survey\\_and\\_assessment.pdf](https://www.epa.gov/sites/production/files/2018-03/documents/sixth_drinking_water_infrastructure_needs_survey_and_assessment.pdf)

Kunkel, G., "Report of the Evaluation of Water Audit Data for New Jersey Water Utilities," January 10, 2017, prepared for NRDC, available at <https://www.nrdc.org/resources/report-evaluation-water-audit-data-new-jersey-water-utilities>

Rutgers School of Environmental and Biological Sciences, "Water Needs through 2040 for New Jersey Public Community Water Supply Systems," 2018 – [http://humeco.rutgers.edu/documents\\_PDF/NJwaterneeds.pdf](http://humeco.rutgers.edu/documents_PDF/NJwaterneeds.pdf)

Rule Reference: N.J. ADMIN. CODE §§ 7:19-2.14 and 7:19-6.4 - [http://www.nj.gov/dep/rules/rules/njac7\\_19.pdf](http://www.nj.gov/dep/rules/rules/njac7_19.pdf)

New Jersey DEP Form: "Water Conservation and Drought or Water Supply Emergency Management Plan Report for Public Water Supply Systems" - <http://www.nj.gov/dep/watersupply/pdf/Cv.Wcp-ws.pdf>

New Jersey DEP, "New Jersey Water Supply Plan 2017-2022" - <http://www.nj.gov/dep/watersupply/wsp.html>

Water Quality Accountability Act (N.J.S.A. 58:31-1 et seq.): [http://www.nj.gov/dep/watersupply/g\\_reg-wqaa.html](http://www.nj.gov/dep/watersupply/g_reg-wqaa.html)

NJ Assembly Bill 2696 and Senate Bill 1742 (2018-2019 Session) -- text and current bill status available by searching the Legislature's website here: <http://www.njleg.state.nj.us/bills/BillsByNumber.asp>

New Jersey Joint Legislative Task Force on Drinking Water Infrastructure Final Report (January 8, 2018): [http://www.njleg.state.nj.us/legislativepub/reports/tdwi\\_final\\_report.pdf](http://www.njleg.state.nj.us/legislativepub/reports/tdwi_final_report.pdf)

DRBC, "Analysis of Calendar Year 2012 Water Audit Data from Public Water Supply Systems in the Delaware River Basin." February 2015.

<http://www.state.nj.us/drbc/library/documents/wateraudits/CY2012audit-report.pdf>

DRBC, "Analysis of Calendar Year 2014 Water Audit Data from Public Water Supply Systems in the Delaware River Basin." February 2016.

<http://www.state.nj.us/drbc/library/documents/wateraudits/CY2014audit-report.pdf>

"Analysis of Calendar Year 2016 Water Audit Data from Public Water Supply Systems in the Delaware River Basin." February 2018.

<http://www.state.nj.us/drbc/library/documents/wateraudits/CY2016audit-report.pdf>