

SENATE, No. 642

STATE OF NEW JERSEY
219th LEGISLATURE

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Sponsored by:

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District 14 (Mercer and Middlesex)

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SYNOPSIS

Requires water purveyors to conduct, and report to DEP, water loss audits.

CURRENT VERSION OF TEXT

Introduced Pending Technical Review by Legislative Counsel.



1 **AN ACT** concerning water loss in public water systems and
2 amending and supplementing various parts of the statutory law.

3
4 **BE IT ENACTED** by the Senate and General Assembly of the State
5 of New Jersey:

6
7 1. R.S.48:2-23 is amended to read as follows:

8 48:2-23. a. The board may, after public hearing, upon notice, by
9 order in writing, require any public utility to furnish safe, adequate
10 and proper service, including furnishing and performance of service
11 in a manner that tends to conserve and preserve the quality of the
12 environment and prevent the pollution of the waters, land and air of
13 this State, and including furnishing and performance of service in a
14 manner which preserves and protects the water quality of a public
15 water **[supply]** system, and to maintain its property and equipment
16 in such condition as to enable it to do so.

17 The board may, pending any such proceeding, require any public
18 utility to continue to furnish service and to maintain its property and
19 equipment in such condition as to enable it to do so.

20 The board, in requiring any public water utility to furnish safe,
21 adequate and proper service, may require the public water utility to
22 retain in its rate base any property which the board determines is
23 necessary to protect the water quality of a public water **[supply]**
24 system.

25 b. Each public water utility shall provide the board with a
26 completed and validated water loss audit report pursuant to section
27 7 of P.L. , c. (C.) (pending before the Legislature as this
28 bill).

29 (cf: P.L.1988, c.163, s.5)

30
31 2. Section 3 of P.L.1981, c.262 (C.58:1A-3) is amended to read
32 as follows:

33 3. As used in the provisions of P.L.1981, c.262 (C.58:1A-1 et
34 **[seq.] al.**), P.L.1993, c.202 (C.58:1A-7.3 et al.) and P.L.2003,
35 c.251 (C.58:1A-13.1 et al.):

36 "Aquaculture" means the propagation, rearing and subsequent
37 harvesting of aquatic organisms in controlled or selected
38 environments, and the subsequent processing, packaging and
39 marketing, and shall include, but need not be limited to, activities to
40 intervene in the rearing process to increase production such as
41 stocking, feeding, transplanting, and providing for protection from
42 predators. "Aquaculture" shall not include the construction of
43 facilities and appurtenant structures that might otherwise be
44 regulated pursuant to any State or federal law or regulation.

EXPLANATION – Matter enclosed in bold-faced brackets **[thus]** in the above bill is
not enacted and is intended to be omitted in the law.

Matter underlined thus is new matter.

1 "Aquatic organism" means and includes, but need not be limited
2 to, finfish, mollusks, crustaceans, and aquatic plants which are the
3 property of a person engaged in aquaculture.

4 **【a.】** "Commissioner" means the Commissioner of **【the**
5 Department of**】** Environmental Protection or the commissioner's
6 designated representative **【;】** .

7 **【b.】** "Consumptive use" means any use of water diverted from
8 surface or ground waters other than a nonconsumptive use as
9 defined in this section **【;】** .

10 "Data validity score" means the assessment of the quality of data
11 used in a water loss audit report in accordance with the data validity
12 scoring system of the American Water Works Association's most
13 current edition of the "Water Audits and Loss Control Programs,
14 Manual M36" and its associated Free Water Audit Software.

15 **【c.】** "Department" means the Department of Environmental
16 Protection **【;】** .

17 **【d.】** "Diversion" means the taking or impoundment of water
18 from a river, stream, lake, pond, aquifer, well, other underground
19 source, or other water body, whether or not the water is returned
20 thereto, consumed, made to flow into another stream or basin, or
21 discharged elsewhere**【;】** .

22 "Level one validation" means the process whereby a water
23 purveyor interacts with a technical expert who did not participate in
24 compiling the water loss audit to review and confirm the basis of all
25 data entries in the water purveyor's water loss audit report and to
26 appropriately characterize the data validity score of the reported
27 data.

28 **【e.】** "Nonconsumptive use" means the use of water diverted
29 from surface or ground waters in such a manner that it is returned to
30 the surface or ground water at or near the point from which it was
31 taken without substantial diminution in quantity or substantial
32 impairment of quality **【;】** .

33 **【f.】** "Person" means any individual, corporation, company,
34 partnership, firm, association, owner or operator of a **【water supply**
35 facility**】** public water system, political subdivision of the State and
36 any state, or interstate agency or Federal agency **【;】** .

37 "Public water system" means a system for the provision to the
38 public of water for human consumption through pipes or other
39 constructed conveyances, if such system has at least 15 service
40 connections or regularly serves an average of at least 25 individuals
41 daily at least 60 days out of the year. "Public water system"
42 includes: (1) any collection, treatment, storage and distribution
43 facilities under control of the operator of such system and used
44 primarily in connection with such system; and (2) any collection or
45 pre-treatment storage facilities not under such control which are
46 used primarily in connection with such system.

1 **g.** "Waters" or "waters of the State" means all surface waters
2 and ground waters in the State;

3 **h.** "Safe or dependable yield" or "safe yield" means that
4 maintainable yield of water from a surface or ground water source
5 or sources which is available continuously during projected future
6 conditions, including a repetition of the most severe drought of
7 record, without creating undesirable effects, as determined by the
8 department **;**

9 **i.** "Aquaculture" means the propagation, rearing and
10 subsequent harvesting of aquatic species in controlled or selected
11 environments, and the subsequent processing, packaging and
12 marketing, and shall include, but need not be limited to, activities to
13 intervene in the rearing process to increase production such as
14 stocking, feeding, transplanting, and providing for protection from
15 predators. "Aquaculture" shall not include the construction of
16 facilities and appurtenant structures that might otherwise be
17 regulated pursuant to any State or federal law or regulation;

18 **j.** "Aquatic organism" means and includes, but need not be
19 limited to, finfish, mollusks, crustaceans, and aquatic plants which
20 are the property of a person engaged in aquaculture;

21 **k.** "Six Mile Run Reservoir Site" means the land acquired by
22 the State for development of the Six Mile Run Reservoir in Franklin
23 Township, Somerset County, as identified by the Eastern Raritan
24 Feasibility Study and the New Jersey Statewide Water Supply Plan
25 prepared and adopted by the department pursuant to section 13 of
26 P.L.1981, c.262 (C.58:1A-13).

27 "Water loss" means the difference between the annual volume of
28 water entering a water distribution system and the annual volume of
29 metered and unmetered water taken by registered customers, the
30 water purveyor, and others who are implicitly or explicitly
31 authorized to do so pursuant to a permit issued by the department,
32 and includes the annual volume lost through breaks, leaks, and
33 overflows on mains, service reservoirs, and service connections, up
34 to the point of customer metering, in addition to unauthorized
35 consumption, metering inaccuracies, and systemic data handling
36 errors.

37 "Water purveyor" means any person that owns or operates a
38 public water system.

39 "Waters" or "waters of the State" means all surface waters and
40 ground waters in the State.

41 (cf: P.L.2003, c.251, s.1)

42

43 3. Section 9 of P.L.1981, c.262 (C.58:1A-9) is amended to read
44 as follows:

45 9. The Board of **Regulatory Commissioners** Public Utilities
46 shall fix just and reasonable rates for any public water **supply**
47 system subject to its jurisdiction, as may be necessary for that

1 system to comply with an order issued by the department or the
2 terms and conditions of a permit issued pursuant to P.L.1981, c.262
3 (C.58:1A-1 et al.) or P.L.1993, c.202 (C.58:1A-7.3 et al.).
4 (cf: P.L.1993, c.202, s.8)

5
6 4. Section 14 of P.L.1981, c.262 (C.58:1A-14) is amended to
7 read as follows:

8 14. a. **【When】** Whenever the department determines that the
9 developed water supply available to a water purveyor is inadequate
10 to service its users with an adequate supply of water under a variety
11 of conditions, the department may order the water purveyor to
12 develop or acquire, within a reasonable period of time, additional
13 water supplies sufficient to provide that service.

14 b. The Division of Local Government Services in the
15 Department of Community Affairs shall, when reviewing the annual
16 budget of any municipality, county, or agency thereof which
17 operates a public water **【supply】** system, certify that an amount
18 sufficient to cover the cost of any order issued to the **【municipality,**
19 **county or agency thereof】** water purveyor pursuant to subsection a.
20 of this section is included in that annual budget.

21 (cf: P.L.1981, c.262, s.14)

22
23 5. Section 15 of P.L.1981, c.262 (C.58:1A-15) is amended to
24 read as follows:

25 15. The department may:

26 a. Perform any and all acts and issue such orders as are
27 necessary to carry out the purposes and requirements of P.L.1981,
28 c.262 (C.58:1A-1 et al.) or P.L.1993, c.202 (C.58:1A-7.3 et al.);

29 b. Administer and enforce the provisions of P.L.1981, c.262
30 (C.58:1A-1 et al.) or P.L.1993, c.202 (C.58:1A-7.3 et al.) and rules,
31 regulations and orders adopted, issued or effective thereunder;

32 c. Present proper identification and then enter upon any land or
33 water for the purpose of making any investigation, examination or
34 survey contemplated by P.L.1981, c.262 (C.58:1A-1 et al.) or
35 P.L.1993, c.202 (C.58:1A-7.3 et al.);

36 d. **【Subpena】** Subpoena and require the attendance of
37 witnesses and the production by them of books and papers pertinent
38 to the investigations and inquiries the department is authorized to
39 make under P.L.1981, c.262 (C.58:1A-1 et al.) or P.L.1993, c.202
40 (C.58:1A-7.3 et al.), and examine them and those public records as
41 shall be required in relation thereto;

42 e. Order the interconnection of public water **【supply】** systems,
43 whether in public or private ownership, whenever the department
44 determines that the public interest requires that this interconnection
45 be made, and require the furnishing of water by means of that
46 public water system to another public water system, but no order
47 shall be issued before comments have been solicited at a public

1 hearing, notice of which has been published at least 30 days before
2 the hearing, in one newspaper circulating generally in the area
3 served by each involved public water **【supply】** system, called for
4 the purpose of soliciting comments on the proposed action.

5 f. Order any person diverting water to improve or repair its
6 water supply facilities so that water loss is eliminated so far as
7 practicable, safe yield is maintained and the drinking water quality
8 standards adopted pursuant to the "Safe Drinking Water Act,"
9 P.L.1977, c.224 (C.58:12A-1 et al.) are met;

10 g. Enter into agreements, contracts, or cooperative
11 arrangements under such terms and conditions as the department
12 deems appropriate with other states, other State agencies, federal
13 agencies, municipalities, counties, educational institutions,
14 **【investor-owned water companies, municipal utilities authorities,】**
15 water purveyors , or other organizations or persons;

16 h. Receive financial and technical assistance from the federal
17 government and other public or private agencies;

18 i. Participate in related programs of the federal government,
19 other states, interstate agencies, or other public or private agencies
20 or organizations;

21 j. Establish adequate fiscal controls and accounting procedures
22 to assure proper disbursement of and accounting for funds
23 appropriated or otherwise provided for the purpose of carrying out
24 the provisions of P.L.1981, c.262 (C.58:1A-1 et al.) or P.L.1993,
25 c.202 (C.58:1A-7.3 et al.);

26 k. Delegate those responsibilities and duties to personnel of the
27 department as deemed appropriate for the purpose of administering
28 the requirements of P.L.1981, c.262 (C.58:1A-1 et al.) or P.L.1993,
29 c.202 (C.58:1A-7.3 et al.);

30 l. Combine permits issued pursuant to P.L.1981, c.262
31 (C.58:1A-1 et al.) or P.L.1993, c.202 (C.58:1A-7.3 et al.) with
32 permits issued pursuant to any other act whatsoever whenever that
33 action would improve the administration of those acts;

34 m. Evaluate and determine the adequacy of ground and surface
35 water supplies and develop methods to protect aquifer recharge
36 areas.

37 (cf: P.L.1993, c.202, s.9)

38
39 6. (New section) a. No later than 18 months after the date of
40 enactment of P.L. , c. (C.) (pending before the Legislature
41 as this bill), the department shall adopt, pursuant to the
42 "Administrative Procedure Act," P.L.1968, c.410 (C.52:14B-1 et seq.),
43 rules and regulations concerning water loss audits. The rules and
44 regulations shall be based on the most current edition of the American
45 Water Works Association's "Water Audits and Loss Control
46 Programs, Manual M36" and its associated Free Water Audit
47 Software. The rules and regulations shall include, but need not be
48 limited to:

- 1 (1) the conduct of annual standardized water loss audits by
- 2 water purveyors;
- 3 (2) the process for level one validation of a water loss audit
- 4 report prior to its submittal to the department;
- 5 (3) the technical qualifications required of a person to engage in
- 6 level one validation;
- 7 (4) the certification requirements for a person selected by a
- 8 water purveyor to provide level one validation of its own water loss
- 9 audit report;
- 10 (5) the method and process for submittal of a water loss audit
- 11 report to the department;
- 12 (6) a requirement to notify the water purveyor's customers of the
- 13 water loss reported in the water audit, on or with the water
- 14 purveyor's next annual consumer confidence report delivered after
- 15 the water audit is submitted, or on or with the next bill the customer
- 16 receives after the water audit is submitted; and
- 17 (7) procedures for the voluntary submittal of a water loss audit
- 18 report by a water purveyor who regularly serves fewer than 3,300
- 19 individuals.
- 20 b. The department shall update the rules and regulations
- 21 adopted pursuant to subsection a. of this section no later than one
- 22 year after the release of any subsequent editions of the American
- 23 Water Works Association's "Water Audits and Loss Control
- 24 Programs, Manual M36."
- 25
- 26 7. (New section) a. (1) No later than 24 months after the date
- 27 of enactment of P.L. , c. (C.) (pending before the
- 28 Legislature as this bill), each water purveyor who regularly serves
- 29 3,300 or more individuals shall submit to the department a
- 30 completed and validated water loss audit report for the previous
- 31 calendar year as prescribed by the department pursuant to the rules
- 32 and regulations adopted pursuant to section 6 of P.L. ,
- 33 c. (C.) (pending before the Legislature as this bill).
- 34 (2) Annually thereafter, each water purveyor required to submit
- 35 a water loss audit report pursuant to paragraph (1) of this subsection
- 36 shall submit a completed and validated water loss audit report
- 37 covering the previous calendar year on or before July 1, or such
- 38 earlier date as may be established by the department.
- 39 b. Each water loss audit report submitted to the department
- 40 shall:
- 41 (1) include the name and technical qualifications of the person
- 42 who conducted the level one validation;
- 43 (2) be attested to by the chief financial officer, chief engineer, or
- 44 general manager of the water purveyor; and
- 45 (3) be accompanied by information, in a form specified by the
- 46 department, identifying the steps taken by the water purveyor in the
- 47 preceding year to reduce the volume of apparent and real water
- 48 losses.

1 c. The department shall deem incomplete and return to a water
2 purveyor any water loss audit report found by the department to be
3 incomplete, not validated, unattested, or incongruent with known
4 characteristics of water system operations. A water purveyor shall
5 resubmit to the department a revised water loss audit report within
6 90 days after an audit has been returned by the department pursuant
7 to this subsection.

8 d. The department shall post all validated water loss audit
9 reports on its internet website in a manner that allows for
10 comparisons across water purveyors. The department shall make
11 the validated water loss audit reports available for public viewing in
12 a timely manner after their receipt.

13

14 8. (New section) No sooner than 36 months and no later than
15 48 months after the date of enactment of P.L. , c. (C.)
16 (pending before the Legislature as this bill), the department, taking
17 into consideration the level one validated water loss audit reports
18 received by the department, shall adopt, pursuant to the
19 “Administrative Procedure Act,” P.L.1968, c.410 (C.52:14B-1 et seq.),
20 rules and regulations:

21 a. specifying a minimum data validity score or a specific level
22 of yearly improvement in the data validity score of future annual
23 water loss audit reports; and

24 b. setting forth performance standards to be met by a water
25 purveyor concerning the volume of water losses.

26

27 9. (New section) For each of the two fiscal years beginning
28 after the date of enactment of P.L. , c. (C.) (pending
29 before the Legislature as this bill), the department, in consultation
30 with the New Jersey Infrastructure Bank created pursuant to section
31 4 of P.L.1985, c.334 (C.58:11B-4), shall, within the limits of funds
32 appropriated or otherwise made available to it, establish a grant
33 program to assist water purveyors in procuring water loss audit
34 report validation.

35

36 10. (New section) a. The department shall provide technical
37 assistance to instruct water purveyors concerning:

38 (1) the American Water Works Association’s “Water Audits and
39 Loss Control Programs, Manual M36” methodology, data tracking,
40 and use of the associated Free Water Audit Software; and

41 (2) the development and implementation of water loss reduction
42 programs, including, but not limited to, metering techniques
43 including testing, repair, and replacement, pressure management
44 techniques, condition-based assessment techniques for transmission
45 and distribution pipelines, and active leak detection.

46 b. The department shall establish a technical advisory
47 committee, which shall include representatives of nonprofit civic

1 and professional organizations, to assist with the implementation of
2 this act.

3

4 11. Section 7 of P.L.2017, c.133 (C.58:31-7) is amended to read
5 as follows:

6 7. a. Beginning no later than 18 months after the effective date
7 of this act, every water purveyor shall implement an asset
8 management plan designed to inspect, maintain, repair, and renew
9 its infrastructure consistent with standards established by the
10 American Water Works Association. The asset management plan
11 shall include:

12 (1) a water main renewal program designed to achieve a 150-
13 year replacement cycle, or other appropriate replacement cycle as
14 determined by a detailed engineering analysis of the asset condition
15 and estimated service lives of the water mains serving the public
16 water system;

17 (2) a water supply and treatment program designed to inspect,
18 maintain, repair, renew, and upgrade wells, intakes, pumps, and
19 treatment facilities in accordance with all federal and State
20 regulations, standards established by the American Water Works
21 Association, and any mitigation plan required pursuant to section 5
22 of this act ; and

23 (3) any other programs, plans, or provisions as may be required
24 by the department pursuant to rules and regulations adopted
25 pursuant to the "Administrative Procedure Act," P.L.1968, c.410
26 (C.52:14B-1 et seq.).

27 Each water purveyor shall dedicate funds on an annual basis to
28 address and remediate the highest priority projects as determined by
29 its asset management plan. A water purveyor that is subject to the
30 requirements of section 7 of P.L. , c. (C.) (pending before
31 the Legislature as this bill) shall consider the findings of its annual
32 water loss audit report when determining which projects shall
33 receive highest priority in its asset management plan pursuant to
34 this subsection.

35 All asset management plans and system condition reports shall
36 be certified to by the licensed operator or professional engineer of
37 the public water system and the responsible corporate officer of the
38 public water system, if privately held, executive director, if an
39 authority, or mayor or chief executive officer of the municipality, if
40 municipally owned, as applicable. The replacement cycle shall be
41 determined by dividing the miles of water main located in the
42 public water system by 150 or other appropriate demonstration set
43 forth in the certified asset management plan prepared pursuant to
44 this section.

45 b. At least once every three years, each water purveyor shall
46 provide to the department and the board, if applicable, a report
47 based on its asset management plan prepared pursuant to subsection
48 a. of this section identifying the infrastructure improvements to be

1 undertaken in the coming year and the cost of those improvements,
2 as well as identifying the infrastructure improvements completed in
3 the past year and the cost of those improvements. A municipal
4 water department or municipal water authority shall also submit the
5 report required pursuant to this subsection to the Division of Local
6 Government Services in the Department of Community Affairs.

7 c. The department, the board, and the Department of
8 Community Affairs shall create a centralized portal allowing for
9 electronic submittal of the report required pursuant to subsection b.
10 of this section. The lack of a centralized portal pursuant to this
11 subsection shall not negate the requirement for a water purveyor to
12 submit a report pursuant to subsection b. of this section.

13 (cf: P.L.2017, c.133, s.7)

14
15 12. This act shall take effect immediately.

16 17 18 STATEMENT

19
20 This bill would amend and supplement the “Water Supply
21 Management Act” to require the State’s water purveyors (i.e.,
22 public and private water providers) who regularly serve at least
23 3,300 individuals to conduct annual water loss audits.

24 All water systems experience some amount of water loss; it may
25 be from leakage in old infrastructure or metering errors. Validated
26 water losses are a key step towards achieving cost-effective
27 reductions in water loss. “Water Loss,” as defined in the bill, refers
28 to the difference between the annual volume of water entering a
29 water distribution system and the annual volume of metered and
30 unmetered water taken by registered customers, the water purveyor,
31 and others who are implicitly or explicitly authorized to do so
32 pursuant to a permit, and includes the annual volume lost through
33 breaks, leaks, and overflows on mains, service reservoirs, and
34 service connections, up to the point of customer metering, in
35 addition to unauthorized consumption, metering inaccuracies, and
36 systemic data handling errors. A water loss audit helps to identify
37 water loss control measures that can conserve water and save
38 money.

39 Specifically, beginning no later than 24 months after the bill is
40 enacted into law, every water purveyor serving at least 3,300
41 individuals would be required to annually submit a water loss audit
42 to the Department of Environmental Protection (DEP). The bill
43 directs the DEP, within 18 months after the bill is enacted into law,
44 to adopt regulations concerning the conduct and validation of water
45 loss audits based on the most current edition of the American Water
46 Works Association’s “Water Audits and Loss Control Programs,
47 Manual M36” and its associated Free Water Audit Software. The
48 regulations would include a requirement to notify the water

1 purveyor's customers of the water loss reported in the water audit
2 on or with the water purveyor's next annual consumer confidence
3 report or on or with the next bill the customer receives after the
4 water audit is submitted. In addition, public water utilities
5 regulated by the Board of Public Utilities would be required to
6 provide the board with a completed and validated water loss audit.

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

14 The bill requires the DEP, in consultation with the New Jersey
15 Infrastructure Bank, to establish, in each of the two fiscal years
16 beginning after the date of enactment of the bill, a grant program to
17 assist water purveyors in procuring water loss audit report
18 validation under the bill, within the limits of funds appropriated or
19 made available to the DEP.

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

31 The bill requires a water purveyor that is subject to the
32 requirements of the "Water Quality Accountability Act" to consider
33 the findings of its annual water loss audit reports when determining
34 which projects shall receive highest priority in its asset management
35 plan required pursuant to section 7 of P.L.2017, c.133 (C.58:31-7).

36 Lastly, the bill updates the definition section and makes other
37 technical amendments to the "Water Supply Management Act."