
A BILL FOR AN ACT

RELATING TO WATER AUDITS.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

1 SECTION 1. The commission on water resource management
2 shall establish a five-year program to provide technical
3 assistance to public water systems to conduct standardized water
4 audits of public water systems in accordance with the method
5 adopted by the American Water Works Association's Water Audits
6 and Loss Control Programs, Manual of Water Supply Practices -
7 M36, as amended.

8 In the first two years, the commission shall establish a
9 program for the counties to conduct standardized water audits of
10 public water systems operated by the counties. In the following
11 two years, the commission shall extend the program to all
12 remaining large capacity public water systems and public water
13 systems in designated water management areas.

14 In establishing the program, the commission shall utilize
15 the American Water Works Association's Free Water Audit
16 Software, Version 5.0 or subsequent versions. The program
17 elements shall include water audit training workshops, level 1



1 validation of water audits and follow-up communication, and
2 recommendations to improve water audit validity scores and to
3 address system losses.

4 SECTION 2. The standardized water audits shall follow the
5 key parameters for establishing a water audit outlined in the
6 American Water Works Association's Water Audits and Loss Control
7 Programs, Manual of Water Supply Practices - M36, as amended,
8 including:

- 9 (1) Describing the distribution system boundaries to
10 identify all water sources supplying water to the
11 system, calculate the system input volume, and
12 calculate the volume of water supplied into the
13 distribution system;
- 14 (2) Setting time periods for the audit that are sufficient
15 to allow analysis and evaluation of the system water
16 supply;
- 17 (3) Establishing standardized units of measure so supply
18 and consumption units are the same;
- 19 (4) Assembling records and data from a wide variety of
20 operations in the water systems, including:



- 1 (A) Water supplied, including volume from own
- 2 sources, and water imported or exported;
- 3 (B) Authorized water consumption, including billed
- 4 metered, billed unmetered, and unbilled metered;
- 5 (C) Water system data, including length of mains,
- 6 number of service connections, average length of
- 7 customer service lines, and average operating
- 8 pressure; and
- 9 (D) Cost data, including total annual cost of
- 10 operating the water system, customer retail unit
- 11 cost, and variable production costs; and
- 12 (5) Identifying, quantifying, and assigning costs to
- 13 apparent losses and real losses.

14 SECTION 3. On January 1, 2017, the commission shall

15 implement the water audit program developed pursuant to sections

16 1 and 2 of this Act, and shall include a process for level 1

17 validation of water loss audit reports which follows the

18 principles and terminology in the American Water Works

19 Association's Water Audits and Loss Control Programs, Manual of

20 Water Supply Practices - M36, as amended, including the Free

21 Water Audit Software, version 5.0 or subsequent versions.



1 The commission shall provide the counties and other
2 operators of public water systems subject to this Act the
3 technical assistance and information necessary to help prepare
4 and validate the water loss audit reports.

5 SECTION 4. Beginning in 2018, and for each subsequent year
6 thereafter, the counties shall submit, on July 1 of each year, a
7 completed and validated water loss audit report for each public
8 water system operated by the counties for the previous calendar
9 year to the commission. Beginning on July 1, 2020, and for each
10 subsequent year thereafter, all remaining large capacity public
11 water systems and public water systems in water management areas
12 shall submit, on July 1 of each year, a completed and validated
13 water loss audit report on their water systems for the previous
14 calendar year to the commission. Each water loss audit report
15 submitted to the commission shall be accompanied by information
16 identifying steps taken in the preceding year to increase the
17 validity of data entered into the final audit, reduce the volume
18 of apparent losses, and reduce the volume of real losses.

19 SECTION 5. As used in this Act:

20 "Commission" means the commission on water resource
21 management.



1 "Designated water management area" means a geographic area
2 that has been designated pursuant to section 174C-41, Hawaii
3 Revised Statutes.

4 "Large capacity public water system" means a public water
5 system that serves a population of one thousand or more.

6 "Level 1 validation" means a water audit that has been
7 subject to a third-party desktop review of data that is
8 immediately available, which may include supply reports,
9 consumption reports, and testing reports. "Level 1 validation"
10 includes utility staff interviews with third-party validators
11 focused on outlining organizational practices to ensure that
12 data validity scores have been assigned correctly and
13 consistently, and confirmed, corrected, or noted as needing
14 further investigation.

15 "Public water system" means a system subject to Federal
16 Safe Drinking Water Act regulations, which provides water for
17 human consumption through pipes or other constructed
18 conveyances. Such a system includes any collection, treatment,
19 storage, and distribution facilities under the control of a
20 utility and used primarily in connection with the system.



1 SECTION 6. There is appropriated out of the general
2 revenues of the State of Hawaii the sum of \$ or so much
3 thereof as may be necessary for fiscal year 2016-2017 to
4 establish and implement the program to conduct standardized
5 water audits of public water systems in accordance with this
6 Act.

7 The sum appropriated shall be expended by the commission on
8 water resource management for the purposes of this Act.

9 SECTION 7. This Act shall take effect on July 1, 2050.



Report Title:

Water Audits; Public Water Systems; Large Capacity Water Systems; Designated Water Management Areas; Appropriation

Description:

Requires the commission on water resource management to establish a program to provide technical assistance to the counties and public water systems to implement standardized water audits of public water systems. Makes an appropriation.
(SB2645 HD1)

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