

AGENDA ITEM MEMO

BOARD MEETING DATE: November 17, 2022

TO: Board Members

THROUGH: Jeff Walker, Executive Administrator
John T. Dupnik, P.G., Deputy Executive Administrator, Water Science
and Conservation
Ashley Harden, General Counsel
As to certain fiscal elements: Rebecca Trevino, Chief Financial Officer

FROM: John Sutton, Manager, Conservation

SUBJECT: Proposed rulemaking on water loss thresholds and audit validation
requirements

ACTION REQUESTED

Consider authorizing the publication of proposed amendments to 31 Texas Administrative Code (TAC) §358.6 relating to water loss audits.

BACKGROUND

In 2013, the 83rd Texas Legislature passed House Bill 3605 amending Texas Water Code §16.0121, effective September 1, 2013, regarding water loss audits that are required of all retail public utilities providing potable water. House Bill 3605 requires a retail public utility (utility) providing potable water that receives financial assistance from the Texas Water Development Board (TWDB) to use a portion of that financial assistance to mitigate the utility's water loss if the utility's water loss meets or exceeds a threshold to be established by TWDB rule. The utility may request a waiver from utilizing some of the financial assistance funds to mitigate its water loss if the utility is currently working to mitigate its water loss or has plans to mitigate its water loss.

Over the last nine years water loss audits and data have evolved, including development of new water loss performance indicators, and there is data from more recent water loss audits to better determine water loss thresholds. The industry has also developed a water loss audit validation process that the TWDB tested and demonstrated can lead to better data. As a result, we reexamined water loss thresholds and validation requirements and propose this rulemaking to address our findings.

KEY ISSUES

The TWDB approved initial water loss thresholds in 2014. Those thresholds were based on statewide data from 2010 water loss audits and water loss metrics that were industry standard at that time. Since those initial thresholds were approved, new performance indicators for water loss have been developed by the American Water Works Association Water Loss Control Committee, a group of water industry leaders in water loss. The thresholds were reexamined using quality-controlled statewide data from 2015 to 2020 water loss audits and these new performance indicators. The new indicators and methods, which primarily affect real loss (water loss due to leaks and breaks, including unknown loss), were accounted for when developing the proposed rule revisions and threshold changes.

Whereas, the thresholds established in 2014 used population, the proposed revisions use density of service connections to categorize water loss thresholds. After extensive testing of different scenarios for the application and calculation of real loss thresholds, it was concluded that separating utilities by low-density and high-density was the most equitable and simplified approach to developing real water loss thresholds. The following proposed thresholds were developed using the more current quality-controlled water loss data to derive the median real loss per connection per day for each density group.

- 1) For water utilities with a service connection density of 32 or more connections per mile, the real loss threshold is reduced from 50 gallons per connection per day to 30 gallons per connection per day. (§358.6(e)(1))
- 2) For water utilities with a service connection density of less than 32 connections per mile, the real loss threshold is revised from 1,600 gallons per mile per day to 57 gallons per connection per day. (§358.6(e)(2))

The proposed revisions simplify the application of real loss thresholds and lower thresholds to address concerns with utilities with a high volume of real loss. In addition, large wholesale water volumes that a utility sells to another retail provider continue to be considered when calculating that utility's real loss threshold. A revision is also proposed to no longer consider apparent loss in calculations that include wholesale volumes, as it is not applicable in the same manner as real loss.

These proposed revisions would only apply to a utility that requests financial assistance from the TWDB for a water supply project and will be used in calculating water loss thresholds for applications for financial assistance reviewed after July 1, 2023.

The proposed rulemaking also includes adding new requirements for water loss validation, a process currently used by several states across the country. Recently, the TWDB funded a pilot water loss audit validation study that found that utilities had a clearer picture of the operational aspects of data collection for their water loss audits after validation. Studies in other states have further found that the validation process provides utilities and financial

assistance program providers, such as the TWDB, insight into how to better direct funds toward water loss mitigation projects.

This new section of the proposed rulemaking would require all utilities receiving financial assistance from the TWDB to have their required annual water loss audit to be validated starting January 1, 2025. TWDB would validate the submitted water loss audit in conference with the utility. If the utility elects to have the water loss audit validated by others, then the validation must follow TWDB's guidelines, be performed by a person other than the person submitting the water loss audit who has completed water loss audit validation training and is certified to conduct such validation. TWDB plans to begin offering validation services in early 2023 in a step towards facilitating utility compliance with this requirement.

RECOMMENDATION

Based on more current data, a better understanding of the data, updated industry performance indicators, and benefits demonstrated by water loss audit validation, the Executive Administrator recommends publishing procedural rules as proposed.

Attachment(s): Rulemaking to be filed with *Texas Register*

The Texas Water Development Board (TWDB) proposes an amendment to 31 Texas Administrative Code (TAC) §358.6.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED AMENDMENT.

Certain retail public utilities are required by Texas Water Code, Chapter 16 to submit water loss audits to the TWDB. The TWDB proposes a new validation requirement on water loss audits required by certain retail public utilities. Additionally, the TWDB is clarifying how it will apply water loss thresholds to retail public utilities based on a utility's service connection density and is adjusting the water loss threshold values to better ensure water loss mitigation is included as an effective strategy of utilities receiving financial assistance for drinking water projects.

SECTION BY SECTION DISCUSSION OF PROPOSED AMENDMENTS.

Subchapter B. Data Collection.

Section 358.6. Water Loss Audits.

Section 358.6(a) is revised to remove the definition of "Category or Categories" in §358.6(a)(5) to add a new definition of "Validation," relating to the process of review of water loss audits and related data submitted to the TWDB for administrative completeness.

Section 358.6(a) is revised to remove the definition of "Unavoidable annual real loss" in §358.6(a)(12) because it is no longer used in the rule.

Section 358.6(b) is revised to remove the stated effective date of §358.6(b)(4) as it has occurred, and the section is currently effective and operative.

Section 358.6(b) is revised to add new §358.6(b)(5) to provide a validation requirement for water loss audits and related data submitted to the TWDB and require the TWDB to create new validation guidelines.

Section 358.6(c) is revised to require that validation of a water loss audit is also required for the executive administrator to determine whether a water loss audit is administratively complete.

Section 358.6(e) is revised to clarify which water loss thresholds the TWDB will apply to certain retail public utilities.

Previous Section 358.6(e)(1) is removed to help clarify how the TWDB applies water loss thresholds of retail public utilities by service connection density.

Section 358.6(e)(2) is renumbered to §358.6(e)(1).

New §358.6(e)(1) clarifies how the TWDB will apply water loss thresholds to certain retail public utilities to conform with industry standard. It applies to those retail public utilities with

more than or equal to 32 service connections per mile rather than population of 10,000 or fewer persons and a service connection density of more than or equal to 32 connections per mile.

New §358.6(e)(1)(B) revises the real loss threshold for these retail public utilities to be less than 30 gallons per connection per day from 50 gallons per connection per day based on currently available water loss data to the TWDB.

Previous Section 358.6(e)(3) is renumbered to §358.6(e)(2).

New §358.6(e)(2) clarifies how the TWDB will apply water loss thresholds to certain retail public utilities to conform with industry standard. It applies new water loss thresholds to certain retail public utilities with less than 32 service connections per mile rather than a population of 10,000 or fewer persons and a service connection density less than 32 connections per mile.

New §358.6(e)(2)(B) clarifies that real loss will be calculated based on a connection per day standard rather than a connection per mile standard to conform with industry standard. It revises the real loss threshold for these retail public utilities to be less than 57 gallons per connection per day from 1,600 gallons per mile per day.

Previous Section 358.6(e)(4) is renumbered to §358.6(e)(3).

New §358.6(e)(3) applies new water loss thresholds to utilities with a volume of wholesale water sales that flow through the retail distribution system.

New §358.6(e)(3)(A) removes the use of a modified calculation that includes wholesale volume to calculate apparent water loss and instead requires that apparent water loss expressed as gallons per connection per day must be less than the utility's allowed apparent water loss.

New §358.6(e)(3)(B) removes the use of a utility's unavoidable annual real loss as a method for calculating real loss. It instead requires that real loss, expressed as gallons per connection per day and including a wholesale factor that accounts for wholesale water volume must be less than the applicable real water loss thresholds as stated in proposed new §§358.6(e)(1) or (e)(2).

FISCAL NOTE: COSTS TO STATE AND LOCAL GOVERNMENTS (Texas Government Code §2001.024(a)(4))

Ms. Rebecca Trevino, Chief Financial Officer, has determined that there will be no fiscal implications for state or local governments as a result of the proposed rulemaking. For the first five years this rule is in effect, there is no expected additional cost to state or local governments resulting from their administration.

These rules are not expected to result in reductions in costs to either state or local governments. These rules are not expected to have any impact on state or local revenues. The rules do not require any increase in expenditures for state or local governments as a result of administering these rules. Additionally, there are no foreseeable implications relating to state or local governments' costs or revenue resulting from these rules.

Because these rules will not impose a cost on regulated persons, the requirement included in Texas Government Code, §2001.0045 to repeal a rule does not apply. Furthermore, the requirement in §2001.0045 does not apply because these rules are necessary to protect water resources of this state as authorized by the Texas Water Code.

The TWDB invites public comment regarding this fiscal note. Written comments on the fiscal note may be submitted to the contact person at the address listed under the Submission of Comments section of this preamble.

PUBLIC BENEFITS AND COSTS (Texas Government Code §2001.024(a)(5))

Ms. Rebecca Trevino also has determined that for each year of the first five years the proposed rulemaking is in effect, the public will benefit from the rulemaking as it clarifies water loss audit requirements for applicable retail public utilities and facilitates the regional water planning process. Ms. Rebecca Trevino also has determined that for each year of the first five years the proposed rulemaking is in effect, the rules will not impose an economic cost on persons required to comply with the rule as it these requirements are imposed by statute.

ECONOMIC AND LOCAL EMPLOYMENT IMPACT STATEMENT (Texas Government Code §§2001.022, 2006.002); REGULATORY FLEXIBILITY ANALYSIS (Texas Government Code §2006.002)

The TWDB has determined that a local employment impact statement is not required because the proposed rule does not adversely affect a local economy in a material way for the first five years that the proposed rule is in effect because it will impose no new requirements on local economies. The TWDB also has determined that there will be no adverse economic effect on small businesses, micro-businesses, or rural communities as a result of enforcing this rulemaking. The TWDB also has determined that there is no anticipated economic cost to persons who are required to comply with the rulemaking as proposed. Therefore, no regulatory flexibility analysis is necessary.

DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION (Texas Government Code §2001.0225)

The TWDB reviewed the proposed rulemaking in light of the regulatory analysis requirements of Texas Government Code §2001.0225 and determined that the rulemaking is not subject to Texas Government Code §2001.0225, because it does not meet the definition of a “major environmental rule” as defined in the Administrative Procedure Act. A “major environmental rule” is defined as a rule with the specific intent to protect the environment or reduce risks to human health from environmental exposure, a rule that may adversely affect in a material way the economy or a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The intent of the rulemaking is to clarify how the TWDB will evaluate water loss audits submitted to it that are statutorily required for certain retail public utilities in compliance with Texas Water Code Chapter 16.

Even if the proposed rule were a major environmental rule, Texas Government Code §2001.0225 still would not apply to this rulemaking because Texas Government Code §2001.0225 only applies to a major environmental rule, the result of which is to: (1) exceed a standard set by federal law, unless the rule is specifically required by state law; (2) exceed an express requirement of state law, unless the rule is specifically required by federal law; (3) exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or (4) adopt a rule solely under the general powers of the agency instead of under a specific state law. This rulemaking does not meet any of these four applicability criteria because it: (1) does not exceed any federal law; (2) does not exceed an express requirement of state law; (3) does not exceed a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; and (4) is not proposed solely under the general powers of the agency, but rather complies instead with Section 16.0121, Texas Water Code. Therefore, this proposed rule does not fall under any of the applicability criteria in Texas Government Code §2001.0225.

The TWDB invites public comment regarding this draft regulatory impact analysis determination. Written comments on the draft regulatory impact analysis determination may be submitted to the contact person at the address listed under the Submission of Comments section of this preamble.

TAKINGS IMPACT ASSESSMENT (Texas Government Code §2007.043)

The TWDB evaluated this proposed rule and performed an analysis of whether it constitutes a taking under Texas Government Code, Chapter 2007. The specific purpose of this rule is to clarify water loss audit thresholds for certain retail public utilities. The proposed rule would substantially advance this stated purpose by requiring validation of water loss audit data submitted to the TWDB while also measuring water loss based on a retail public utility's service connection density rather than population and service connection density to match industry standards.

The TWDB's analysis indicates that Texas Government Code, Chapter 2007 does not apply to this proposed rule because this is an action that is reasonably taken to fulfill an obligation mandated by state law which is exempt under Texas Government Code §2007.003(b)(4). The TWDB is the agency charged with compiling this information for the appropriate development of water management strategies to be included in local, regional water plans.

Nevertheless, the TWDB further evaluated this proposed rule and performed an assessment of whether it constitutes a taking under Texas Government Code Chapter 2007. Promulgation and enforcement of this proposed rule would be neither a statutory nor a constitutional taking of private real property. Specifically, the subject proposed regulation does not affect a landowner's rights in private real property because this rulemaking does not burden, restrict, or limit the owner's right to property and reduce its value by 25% or more beyond that which would otherwise exist in the absence of the regulation. In other words, this rule requires compliance with existing statewide water loss auditing requirements in Chapter 16, Texas Water Code without burdening or restricting or limiting the owner's right to property and reducing its value

by 25% or more. Therefore, the proposed rule does not constitute a taking under Texas Government Code, Chapter 2007.

GOVERNMENT GROWTH IMPACT STATEMENT (Texas Government Code §2001.0221)

The TWDB reviewed the proposed rulemaking in light of the government growth impact statement requirements of Texas Government Code §2001.0221 and has determined, for the first five years the proposed rule would be in effect, while the proposed rule (1) will require the creation of new employee positions and (2) will expand an existing regulation through requiring a validation requirement on the submittal of certain water loss audits.

AGENCY REVIEW OF EXISTING RULES (Texas Government Code §2001.039)

The TWDB reviewed the proposed rulemaking in light of the statutory requirement for the Agency to review existing rules in Texas Government Code §2001.039 and has determined that the proposed rulemaking to 31 TAC §358.6 is necessary to comply with §6.101, which provides the TWDB with the authority to adopt rules necessary to carry out the powers and duties in the Water Code and also specifically under §16.0121, Texas Water Code, which imposes a requirement on the TWDB to develop methodologies for water loss audits.

SUBMISSION OF COMMENTS (Texas Government Code §2001.024(a)(7))

Written comments on the proposed rulemaking may be submitted by mail to Office of General Counsel, Texas Water Development Board, P.O. Box 13231, Austin, Texas 78711-3231, by email to rulescomments@twdb.texas.gov, or by fax to (512) 475-2053. Comments will be accepted until 5:00 p.m. of the 31st day following publication the Texas Register. Include Chapter 363 in the subject line of any comments submitted.

STATUTORY AUTHORITY (Texas Government Code §2001.024(a)(3))

The amendment is proposed under the authority of Texas Water Code §6.101, which provides the TWDB with the authority to adopt rules necessary to carry out the powers and duties in the Water Code and other laws of the State, and also under the authority of Texas Water Code Section 6.0121.

Cross-reference to statute: This rulemaking affects Texas Water Code, Chapter 16, Subchapter B.

<rule>

TITLE 31 NATURAL RESOURCES AND CONSERVATION

PART 10 TEXAS WATER DEVELOPMENT BOARD

CHAPTER 358 STATE WATER PLANNING GUIDELINES

SUBCHAPTER B DATA COLLECTION

§358.6 Water Loss Audits

(a) Definitions. Unless otherwise indicated, in this section the following terms shall have the meanings assigned.

(1) Allowed apparent loss--A unique number for allowable apparent loss calculated for each utility.

(2) Annual real loss--A unique number calculated for each utility based on the utility's real loss on an annualized basis.

(3) Apparent loss--Unauthorized consumption, meter inaccuracy, billing adjustments, and waivers.

(4) Average system operating pressure--System operating pressure in pounds per square inch calculated using a weighted average approach as identified in the American Water Works Association M36 Manual.

~~[(5) Category or Categories--A category of retail public utility as listed in Texas Water Code §16.0121(e).]~~

(5) Validation - The process of examining water loss audit inputs to identify and correct inaccuracies in water loss audit data and the application of methodology to evaluate and communicate the uncertainty inherent in water loss audit data.

(6) Executive Administrator--The executive administrator of the Board.

(7) Mitigation--An action or actions taken by a retail public utility to reduce the amount of total water loss in a system. Mitigation may include a detailed water loss assessment, pipe or meter replacement, or addition or improvement of monitoring devices to detect water loss.

(8) Real loss--Loss from main breaks and leaks, storage tank overflows, customer service line breaks, and line leaks.

(9) Retail public utility or utility--A retail public utility as defined by Texas Water Code §13.002.

(10) Service connection density--The number of a retail public utility's connections on a per mile basis.

(11) Total water loss--The sum of a utility's real loss and apparent loss.

~~[(12) Unavoidable annual real loss--A unique number calculated for each utility based on the number of connections, miles of distribution lines, and operating pressure.]~~

(b) A retail public utility that provides potable water shall perform a water loss audit and file with the executive administrator a water loss audit computing the utility's system water loss during the preceding calendar year, unless a different 12-month period is allowed by the executive administrator. The water loss audit may be submitted electronically.

(1) Audit required annually. The utility must file the water loss audit with the executive administrator annually by May 1st if the utility:

(A) has more than 3,300 connections; or

(B) is receiving financial assistance from the board, regardless of the number of connections. A retail public utility is receiving financial assistance from the board if it has an outstanding loan, loan forgiveness agreement, or grant agreement from the board.

(2) Audit required every five years. The utility must file the water loss audit with the executive administrator by May 1, 2016, and every five years thereafter by May 1st if the utility has 3,300 or fewer connections and is not receiving financial assistance from the board.

(3) The water loss audit must be performed in accordance with methodologies developed by the executive administrator based on the population served by the utility and taking into consideration the financial feasibility of performing the water loss audit, population density in the service area, the retail public utility's source of water supply, the mean income of the service population, and any other factors determined by the executive administrator. The executive administrator will provide the necessary forms and methodologies to the retail public utility.

(4) ~~A [Effective January 1, 2019, the]~~ water loss audit must be performed by a person who has completed water loss audit training developed by the executive administrator. The executive administrator will make such training available without charge on the agency website and may also provide such training in person or by video.

(5) Effective January 1, 2025, a utility required to submit a water loss audit annually as described in section (b)(1)(B) or that is applying for financial assistance will be required to have its most current water loss audit validated within three months of submittal or prior to consideration of a request for financial assistance from the board. The executive administrator will validate the submitted water loss audit in conference with the retail public utility. Alternatively, the utility may elect to have the water loss audit validated by a person other than the executive administrator. Should a water loss audit be validated by a person other than the executive administrator's staff, validation must follow TWDB's validation guidelines and be performed by a person other than the person submitting the water loss audit, who has completed water loss audit validation training and is certified to conduct such validation.

(c) The executive administrator shall determine if the water loss audit is administratively complete. A water loss audit is administratively complete if all required responses are provided, ~~and~~ the audit is completed by a person who has been trained to conduct water loss auditing as described in subsection (b)(4), [paragraph (4) of subsection (b),] and the audit has been

validated as described in subsection (b)(5) [~~paragraph (5) of subsection (b)~~]. In the event the executive administrator determines that a retail public utility's water loss audit is incomplete, the executive administrator shall notify the utility.

(d) A retail public utility that provides potable water that fails to submit a water loss audit or that fails to correct a water loss audit that is not administratively complete within the timeframe provided by the executive administrator is ineligible for financial assistance for water supply projects under Texas Water Code, Chapter 15, Subchapters C, D, E, F, G, H, J, O, Q, and R; Chapter 16, Subchapters E and F; and Chapter 17, Subchapters D, I, K, and L. The retail public utility will remain ineligible for financial assistance until a complete water loss audit has been filed with and accepted by the executive administrator.

(e) The following thresholds shall apply to certain [~~the indicated categories of~~] retail public utilities~~[y]~~:

~~[(1) For a retail public utility with a population of more than 10,000:~~

~~(A) Apparent loss expressed as gallons per connection per day must be less than the utility's allowed apparent loss.~~

~~(B) Real loss expressed as gallons per connection per day must be less than three times the utility's unavoidable annual real loss.]~~

(1) [~~(2)~~] For a retail public utility with a [~~population of 10,000 or fewer and a~~] service connection density more than or equal to 32 connections per mile:

(A) Apparent loss expressed as gallons per connection per day must be less than the utility's allowed apparent loss.

(B) Real loss expressed as gallons per connection per day must be less than 30 [~~50~~] gallons per connection per day.

(2) [~~(3)~~] For a retail public utility with a [~~population of 10,000 or fewer and~~] a service connection density less than 32 connections per mile:

(A) Apparent loss expressed as gallons per connection per day must be less than the utility's allowed apparent loss.

(B) Real loss expressed as gallons per connection [~~mile~~] per day must be less than 57 [~~1,600~~] gallons per connection [~~mile~~] per day.

(3) [~~(4)~~] For a utility that has a volume of wholesale water sales that flow through the retail water distribution system:

(A) Apparent loss expressed as gallons per connection per day [~~determined using a modified calculation that includes the wholesale volume;~~] must be less than the utility's allowed apparent loss.

(B) Real loss, expressed as gallons per connection per day and including a wholesale factor that takes into account the wholesale water volume, must be less than the applicable real loss threshold described in subsections (e)(1)(B) or (e)(2)(B). [~~three times the utility's unavoidable annual real loss.~~]

(f) If a retail public utility's total water loss meets or exceeds the threshold for that utility, the retail public utility must use a portion of any financial assistance received from the board for a water supply project to mitigate the utility's water loss. Mitigation will be in a manner determined by the retail public utility and the executive administrator in conjunction with the project proposed by the utility and funded by the board. On the request of a retail public utility, the board may waive the requirements of this subsection if the board finds that the utility is satisfactorily mitigating the utility's system water loss. The request for waiver should be addressed to the executive administrator and include information about the utility's current or planned activities to mitigate their water loss and their source of funding for that mitigation.