

PROPOSED RULEMAKING

PENNSYLVANIA PUBLIC UTILITY COMMISSION

[52 PA. CODE CH. 65]

Proposed Water Audit Methodology Regulation 52 Pa. Code § 65.20a—Water Conservation Measures

Public Meeting held
November 18, 2021

Commissioners Present: Gladys Brown Dutrieuille, Chairperson; John F. Coleman, Jr., Vice Chairperson; Ralph V. Yanora

*Proposed Water Audit Methodology Regulation
52 Pa. Code § 65.20a—Water conservation measures;
L-2020-3021932*

Notice of Proposed Rulemaking Order

By the Commission:

The Pennsylvania Public Utility Commission (PUC) adopts this Notice of Proposed Rulemaking (NOPR) Order¹ and seeks comments on proposed language for a regulation at 52 Pa. Code § 65.20a, relating to water conservation measures.

Background

The General Assembly has empowered the PUC to enact regulations governing public utilities. Section 501 of the Public Utility Code, 66 Pa.C.S. § 501(b), provides in relevant part that:

[T]he commission shall have general administrative power and authority to supervise and regulate all public utilities doing business within this Commonwealth. The commission may make such regulations, not inconsistent with law, as may be necessary or proper in the exercise of its powers or for the performance of its duties.

Section 504 of the Public Utility Code, 66 Pa.C.S. § 504, provides in pertinent part that the PUC:

[M]ay require any public utility to file periodical reports, at such times, and in such form, and of such content, as the commission may prescribe, and special reports concerning any matter whatsoever about which the commission is authorized to inquire, or to keep itself informed, or which it is required to enforce.

The PUC's existing policy statement on water conservation measures, 52 Pa. Code § 65.20 (Water Conservation Policy Statement), provides guidance to water utilities in encouraging cost-effective water conservation by their customers. It was issued under the Public Utility Code, 66 Pa.C.S. § 523(b) relating to performance factor consideration. The Water Conservation Policy Statement was adopted on April 7, 1989, and became effective on April 8, 1989, when it was published at 19 Pa.B. 1575.

On November 10, 2008, the PUC entered a Tentative Order at Docket No. M-2008-2062697 regarding a pilot program to implement the American Water Works Association Water Audit Methodology (AWWA Methodology). The November 10, 2008, Order became final on December

10, 2008, as evidenced by a Secretarial Letter issued on January 13, 2009, and is referred to herein as the "December 10, 2008 Order." The AWWA Methodology quantifies non-revenue water by volume, cost and data quality using a standard water audit spreadsheet provided at no charge by AWWA. The AWWA Methodology characterizes non-revenue water standing through performance indicators that independently assess apparent losses, real losses, costs, and data validity. The AWWA Methodology is an effective means for loss control target setting and measurable performance improvement. By way of the December 10, 2008, Order, the PUC invited all jurisdictional water utilities to voluntarily participate in a pilot program to implement the AWWA Methodology. Aqua Pennsylvania, Inc., Pennsylvania-American Water Company, Superior Water Company, York Water Company, and United Water Company, Inc., chose to participate in the program.

On November 10, 2011, the PUC entered a Tentative Order at Docket No. M-2008-2062697 wherein the PUC ordered all Class A water utilities to implement the AWWA Methodology.² The November 10, 2011, Order became final on January 27, 2012, as evidenced by a Secretarial Letter issued on January 27, 2012, and is referred to herein as the "January 27, 2012, Order." The January 27, 2012, Order also directed preparation of proposed regulations implementing the AWWA Methodology as a best management practice in water loss control in Pennsylvania.

On September 17, 2020, the PUC entered an Advanced Notice of Proposed Rulemaking Order (ANOPR Order) at this docket, which was published in the *Pennsylvania Bulletin* on October 10, 2020, 50 Pa.B. 5657.³ In the ANOPR Order, the PUC invited comments from the regulated community and other interested parties within 45 days of publication which would include proposed regulatory language, experienced benefits and costs of the proposed methodology, and the suggested scope of the regulation. The ANOPR Order did not contain draft language of a proposed regulation.

Comments were received from the Office of Consumer Advocate (OCA). Joint comments were received from the Pennsylvania Chapter of National Association of Water Companies⁴ and Aqua Pennsylvania, Inc. (collectively NAWC-PA and Aqua); and from AWWA Water Loss Control Committee Members George Kunkel, David Sayers, Edward Osann, Steve Cavanaugh, Will Jernigan, and Drew Blackwell (collectively AWWA Committee).

With the many challenges facing the water industry, including, rising costs to rehabilitate aging infrastructure, increased energy costs, increased costs of chemicals and other treatment necessary to meet the more stringent requirements of the Pennsylvania Safe Drinking Water Act, 35 P.S. §§ 721.1—721.17, and the limited availability and higher costs for developing new sources of supply, this NOPR Order reflects the PUC's effort to develop a

² The January 27, 2012 Order, *inter alia*, noted that that our "comprehensive Policy Statement on Conservation calls for an ongoing leak detection and repair program as an integral part of maintaining low levels of UFW." January 27, 2012 Order at 3.

³ The caption of this rulemaking proceeding referenced Section 65.20 in the ANOPR. This regulation would, however, be codified at 52 Pa. Code § 65.20a rather than Section 65.20 pursuant to directions from the Legislative Reference Bureau.

⁴ NAWC-PA is a trade organization whose members are investor-owned jurisdictional water public utilities in the Commonwealth. The members are Columbia Water Company, Newtown Artesian Water Company, Pennsylvania American Water Company, SUEZ Water Pennsylvania Inc., and The York Water Company. NAWC-PA provides its members with a vehicle for expressing their position on legislative and regulatory developments before the General Assembly, regulatory agencies, and the courts. NAWC-PA and Aqua Joint Comments at 1-2.

¹ This Order serves as the PUC's "preamble" for this proposed regulatory process. See 1 Pa. Code § 301.1, regarding definitions.

more comprehensive codified water audit method as a tool to increase the efficiency of a water public utility's efforts to conserve water, account for lost water, increase water supply sustainability, remediate infrastructure, and improve overall service reliability.⁵

Discussion

A. Summary of Comments

1. Office of Consumer Advocate

OCA submitted Comments on November 24, 2020. OCA recommended that the water loss audit reports be available for stakeholders to review and be easy to find on the PUC's website. (OCA Comments at 2). OCA further proposed that the water audit submissions be reviewed for consistency and that the data be validated on a regular basis. (OCA Comments at 2-3). OCA asserted that the data should be verified by the utility and that the PUC's Bureau of Technical Utility Services (TUS), the PUC's Bureau of Audits, or both review the submissions to ensure that the data are validated on a regular basis. (OCA Comments at 3). OCA did not take a position on whether the Class B or Class C water public utilities should be required to use the AWWA Methodology or comparable water audit methodology. (OCA Comments at 3).

2. National Association of Water Companies—Pennsylvania Chapter & Aqua Pennsylvania, Inc.

NAWC-PA and Aqua submitted joint comments on November 24, 2020. NAWC-PA and Aqua enumerated the strengths of the AWWA Methodology. (NAWC-PA and Aqua Comments at 3).

NAWC-PA and Aqua asserted that a regulation is premature at this time and that there is no adequate empirical foundation for establishing a benchmark. (NAWC-PA and Aqua Comments at 5-7). NAWC-PA and Aqua submitted that the PUC needs to analyze the information currently filed by Class A water public utilities prior to drafting the regulation. (NAWC-PA and Aqua Comments at 5-7). If, however, a regulation is to be promulgated, NAWC-PA and Aqua asserted that the regulation should include a benchmark for non-revenue water and consequences in the event that a particular system exceeds the benchmark. (NAWC-PA and Aqua Comments at 8). NAWC-PA and Aqua encouraged the PUC to favor bringing a public water utility into compliance with the benchmark rather than imposing penalties on non-compliant utilities. (NAWC-PA and Aqua Comments at 8-9). NAWC-PA and Aqua requested that a working group of stakeholders be convened to review and draft the subject regulation. (NAWC-PA and Aqua Comments at 9).

NAWC-PA and Aqua further asserted that, if a regulation is to be promulgated at this time, all jurisdictional public water utilities should be required to submit at least one water audit using the AWWA Methodology. (NAWC-PA and Aqua Comments at 4). NAWC-PA and Aqua suggested that medium and large water public utilities (i.e., those with more than 10,000 customers) should complete annual water loss audits while smaller utilities should complete a water loss audit every five (5) years. (NAWC-PA and Aqua Comments at 7-8). NAWC-PA and Aqua submitted that a water public utility should complete a water audit using the AWWA Methodology for

all their systems but be permitted to submit a single document to the Commission. (NAWC-PA and Aqua Comments at 7).

NAWC-PA and Aqua detailed the costs and savings associated with the AWWA Methodology. They submitted that preparing a water audit is significantly more costly than calculating unaccounted-for water. (NAWC-PA and Aqua Comments at 3). In order to collect data and file an annual report for each system, NAWC-PA and Aqua estimated that a water public utility will consume fifty (50) hours of time or more throughout the year. (NAWC-PA and Aqua Comments at 3). NAWC-PA and Aqua estimated the cost to be \$2,500 per report. (NAWC-PA and Aqua Comments at 3-4). NAWC-PA and Aqua were also concerned with costs a water public utility may incur if water loss is too high and corrective action is needed. (NAWC-PA and Aqua Comments at 4). NAWC-PA and Aqua provided that reducing the avoidable loss of water will save a water public utility on production costs of roughly \$500 per million gallons for surface water systems and \$250 per million gallons for well systems. (NAWC-PA and Aqua Comments at 4).

3. AWWA Water Loss Control Committee Members

The AWWA Committee submitted comments on November 24, 2020, and supplemental comments on November 25, 2020. The AWWA Committee also set forth the many benefits of the AWWA Methodology and provided the background and an explanation of the AWWA Methodology. (AWWA Committee Comments at 3-26). The AWWA Committee suggested training for water public utility staff, PUC staff, and other stakeholders on the AWWA Methodology, data collection and self-assessment of water supply operations. (AWWA Committee Comments at 4). The AWWA Committee suggested that water loss audits be submitted for individual systems in electronic MS Excel format with an attestation by a senior executive of the water public utility to confirm the accuracy and completeness of the water loss audit submittal. (AWWA Committee Comments at 4). AWWA Committee also submitted that validation of the assembled water audit loss data is an essential quality control check. (AWWA Committee Comments at 4).

The AWWA Committee asserted that the water loss audit data should be compiled into a summary and posted on the PUC's website annually. (AWWA Committee Comments at 21). The AWWA Committee also provided suggested regulatory language. (AWWA Committee Comments at 27-29; AWWA Committee Supplemental Comments at 1-3).

B. Summary of the Proposed Water Conservation Measures Regulation as Set Forth in Annex A

The proposed regulation as set forth in Annex A would replace and supersede the current Water Conservation Policy Statement at 52 Pa. Code § 65.20. In addition to proposing a methodology, this NOPR also proposes to promulgate as regulations the other recommendations in the Water Conservation Policy Statement.

Subsection 65.20a(a)—General

This new regulation would establish as regulatory obligations the water conservation measures currently enshrined as recommendations in the Water Conservation Policy Statement for all water public utilities and establish a water loss audit obligation for Class A water public utilities. The PUC would review a water public utility's compliance or lack thereof with the new regulation when determining just and reasonable rates and could consider non-compliance in any other proceedings. Subsections

⁵ The proposed regulation does not address water that is lost prior to being treated (i.e., raw water). Raw water loss tends to be a limited quantity and does not have the same value as treated water.

65.20a(a), 65.20a(b), and 65.20a(d)—65.20a(k) would be applicable to all water public utilities. Subsection 65.20a(c) would be applicable to Class A water public utilities.

Subsection 65.20a(b)—Definitions

This subsection would define terms used in this section that are not defined elsewhere in the Title 52.

Subsection 65.20a(c)—Water loss audit for a Class A water public utility

This proposed subsection is predicated on the December 10, 2008, Order that established the voluntary pilot program for Class A water public utilities and on the January 27, 2012 Order in which the PUC ordered all Class A water utilities to implement the AWWA Methodology and indicated that a rulemaking would be commenced.

Pursuant to the proposed regulation, each Class A water public utility would be required to conduct an annual water loss audit with results reported to the PUC by April 30th of the following year. The results would have to be verified and provided in a working electronic format to the PUC. The annual water loss report would be completed for each discrete water system.

Class A water utilities would have to use a water audit methodology that, at a minimum, would quantify and address the following metrics and report criterion: (i) Water supplied, in gallons; (ii) Authorized consumption, in gallons; (iii) Water losses, in gallons; (iv) Non-revenue water, in gallons; (v) Distribution system characteristics; (vi) Operational cost data; (vii) Performance indicators, including financial indicators and operational efficiency indicators; (viii) Comment on any reported metric value that varied greater than 10% in either direction from the previous year's reported value and has not improved over three years of reporting; (ix) Indication of the confidence in the validity and accuracy of the value reported for each metric and a summation of the overall validity and accuracy of the data reported; (x) Description of priority areas the utility intends to address to reduce future water loss.

We acknowledge the concerns of NAWC-PA and Aqua that the AWWA Free Water Audit Software may be revised from time to time by AWWA. We also acknowledge that we cannot incorporate into regulations a directive that a regulated entity use the "most current" version as may be on offer in the future. Information regarding the permissive use of later versions will be addressed by the PUC as may be required.

Use of the AWWA Free Water Audit Software Version 6.0 (2020) would satisfy the annual water loss reporting requirements. If a water public utility seeks to use an alternative water audit methodology or a version other than the AWWA Free Water Audit Software Version 6.0 (2020), the water public utility would need to file, for review by the PUC at least 60 days prior to the end of the calendar year, all the technical and engineering formulas and metrics needed to substantiate how the alternative methodology or alternate version meets or exceeds the requisite metrics. Upon approval by the PUC of the alternate formulas and metrics or alternate version of the AWWA Free Water Audit Software, the water public utility would then proceed to file its annual water loss report using the approved alternate water audit loss methodology with the PUC by April 30th of the following year.

The PUC agrees with NAWC-PA and Aqua that there is not an adequate empirical foundation for establishing a

benchmark using the water audit methodology as the information currently filed by Class A utilities has not always been reported on a discrete system basis but instead, in many instances, was reported on a composite basis for numerous non-interconnected water systems. As such, the purpose of the proposed regulation is to standardize the water audit methodology's use and reporting to improve the quality and value of the information filed. Further, until there is an adequate empirical foundation for a benchmark to be established, the PUC will continue to require a Class A water public utility to report its unaccounted-for water using Schedule 500 of the utility's Annual Financial Report to the PUC.

Subsection 65.20a(d)—Unaccounted-for water

This proposed subsection is predicated on Subsection 65.20(4) relating to unaccounted-for water. Class A, Class B, and Class C water public utilities would have to report unaccounted-for water using Schedule 500 of the public utility's Annual Financial Report to the PUC. Levels of unaccounted for water would have to be kept within reasonable amounts. Levels above 20% have been considered by the PUC to be excessive. By continuing to monitor unaccounted-for water and comparing it to the water loss information, we can evaluate the two measurements. Until we have a benchmark for water loss, the unaccounted-for metric provides continuity in evaluating performance without jeopardizing the reliability of systems.

Subsection 65.20a(e)—Leak detection

This proposed subsection is predicated on Subsection 65.20(5) relating to leak detection. The proposed regulation would require a water public utility to use a system of leak detection on a regular basis with leaks being repaired as expeditiously and economically as possible. Leaks increase customer costs, decrease shareholder profits, decrease reliability and quality of the water supplies, negatively impact the environment, and compromise the safety of persons and properties near the leak. Undetected leaks exacerbate the negative impacts and risk unplanned outages for repairs.

Subsection 65.20a(f)—Metering

This proposed subsection is predicated on Subsection 65.20(6) relating to metering. The proposed subsection would require a comprehensive metering program reflecting a water public utilities obligations under Section 65.8 relating to metering that includes metering sources of supply, metering service to customers, and regular testing and maintenance of meters in service. The water public utility would be required to provide documentation of the program to the Commission upon request. However, in light of Section 65.8, parties should comment on whether the proposed Subsection 65.20a(f) is warranted.

Subsection 65.20a(g)—Mandatory conservation contingency plan

This proposed subsection is predicated on Subsection 65.20(7) relating to conservation plans and Section 65.11 relating to mandatory conservation measures. The proposed regulation would require each water public utility to incorporate its mandatory conservation contingency plan in its tariff in order to document its mandatory conservation measures obligations under Section 65.11. However, in light of Section 65.11, parties should comment on whether the proposed Subsection 65.20a(g) is warranted.

Subsection 65.20a(h)—Efficiency plumbing fixtures

This proposed subsection is predicated on Subsection 65.20(3) relating to efficiency plumbing fixtures. A water public utility would be required to notify each customer annually that water-saving plumbing fixtures should be installed in new construction or remodeling. The notice to customers would also have to encourage customers to retrofit existing plumbing fixtures. While a water public utility cannot mandate that its customers use efficient plumbing fixtures, it can help customers to understand that conservation behind the meter helps to minimize the need for new infrastructure and reduces demand on a water system. The water public utility would be required to consult with the PUC's Communications Office and the PUC's Bureau of Consumer Services regarding the initial development and subsequent revisions of efficiency materials.

Subsection 65.20a(i)—Education

This proposed subsection is predicated on Subsection 65.20(1) relating to education. A public utility would be required to provide each customer with a brochure or similar type of material at least once per year which discusses efficient water use practices, the expensive waste caused by leaking plumbing fixtures, the availability of retrofitting plumbing devices to curtail unnecessary water use, and the possible savings on water and fuel bills that could ensue with the implementation of these conservation methods. Customer education is paramount to customer awareness of the need for and understanding of efficient water use practices and consequences of wasted water. The water public utility would be required to consult with the PUC's Communications Office and the PUC's Bureau of Consumer Services regarding the initial development and subsequent revisions of these educational materials.

Subsection 65.20a(j)—Water audit for large a nonresidential customer

This proposed subsection is predicated on Subsection 65.20(2) relating to water audit for large users. On an annual basis, each water public utility would be required to inform each large, nonresidential customer of the availability of the large water user audit procedure developed by the Department of Environmental Protection (DEP) via a printed message on or with a periodic bill. The water audit procedure developed by DEP is intended to guide large water consumers in estimating the water and energy savings that can be realized as a result of installing low flow plumbing fixtures and reducing potable water consumption.

Subsection 65.20a(k)—Penalties

If the obligations proposed herein are established as regulatory requirements, then it would be appropriate to also establish consequences for a failure to comply with the regulatory requirements. This subsection would subject a non-compliant water public utility to a penalty as provided under 66 Pa.C.S. § 3301. Continued failure to file annual reports may result in additional penalties.

C. Impact of the Proposed Regulation

Pursuant to the January 27, 2012, Order, the PUC formally adopted the AWWA Methodology, and all Class A water public utilities have been filing the annual water loss audit report each year. Presently, within the Commonwealth, the PUC and the Delaware River Basin Commission employ the AWWA Methodology and require submittal of annual water loss audit data using the Free Water Audit Software (FWAS) for water utilities under

their jurisdiction. As such, Class A water public utilities are already familiar with the AWWA Methodology, FWAS, and data collection required for each system. With the Class A water public utilities already filing the annual water loss audit report, there should be minimal impact on the operations of those water public utilities related to the completion of the proposed water loss audit and the filing of an annual water loss report contemplated by the proposed regulations.

In filing the annual water loss audit report, Class A water public utilities would recognize and monetize losses for each system and document its plans to implement corrective action. Reducing the avoidable loss of water should save costs incurred by water public utilities for production and delivery of potable water. NAWC-PA and Aqua estimated that reducing the avoidable loss of water would save utilities roughly \$500 per million gallons for surface water systems and \$250 per million gallons for well systems on production costs.

The proposed AWWA Methodology or a comparable water loss audit methodology would allow a Class A water public utility to make a meaningful assessment of its water loss standing, compare itself with other water public utilities, and set performance targets. We find that Class A utilities, along with their customers, will be well served by implementing the AWWA Methodology or a comparable water audit methodology. Lost water incurs unnecessary costs for pumping or treating or both, increases the risk of damage to surrounding areas, can cause unplanned service outages, and threatens the availability and availability of water being delivered to customers. Operational efficiencies such as reduced water loss and planned, rather than emergency, repairs can be expected through improved tracking of water that is not revenue producing. Ultimately, we expect that tighter control of water production, to match the actual customer demand, will assist in sustaining existing water sources.

In addition, the availability of an annual water loss audit would allow an interested party to access the annual water audit summaries that a public utility would file with the PUC. This access would enhance the transparency of the regulatory process and remove the uncertainty involved with the use of the unaccounted-for water method. Overall, implementation of the AWWA Methodology or a comparable water audit methodology would help achieve a number of public interest benefits such as increased infrastructure reliability, preservation of water resources, reduction in water leakage, reduced overall water public utility risk, and enhanced customer service.

Conclusion

Accordingly, under Sections 501 and 504 of the Public Utility Code, 66 Pa.C.S. §§ 501 and 504; Section 201 of the Act of July 31, 1968 (P.L. 769, No. 240), known as the Commonwealth Documents Law (45 P.S. § 1201), and the regulations promulgated thereunder at 1 Pa. Code §§ 7.1, 7.2 and 7.5; Section 204(b) of the Commonwealth Attorneys Act (71 P.S. § 732-204(b)); Section 5 of the Regulatory Review Act (71 P.S. § 745.5); and Section 612 of The Administrative Code of 1929 (71 P.S. § 232), and the regulations promulgated thereunder at 4 Pa. Code §§ 7.231—7.234, the PUC proposes adoption of a regulation at 52 Pa. Code § 65.20a as set forth in Annex A which would replace the existing Water Conservation Policy Statement at 52 Pa. Code § 65.20. Upon completion of the rulemaking, the PUC will commence revocation of the Water Conservation Policy Statement; *Therefore,*

It Is Ordered That:

1. A proposed rulemaking be opened to consider the proposed water audit methodology regulation set forth in Annex A.

2. The Law Bureau shall submit this Notice of Proposed Rulemaking Order and Annex A to the Office of the Attorney General for review and approval and to the Governor's Budget Office for review for fiscal impact.

3. Upon completion of the reviews by the Office of Attorney General and the Governor's Budget Office, the Law Bureau shall submit this Notice of Proposed Rulemaking Order and Annex A for review and comment to the Legislative Standing Committees, the Legislative Reference Bureau for publication in the *Pennsylvania Bulletin*, and the Independent Regulatory Review Commission.

4. Interested parties may file written comments referencing Docket No. L-2020-3021932 within 45 days of publication in the *Pennsylvania Bulletin* and may file written reply comments within 45 days of the deadline for filing comments. Comments and reply comments are to be filed electronically through the Commission's e-File System. See <https://efiling.puc.pa.gov/> for instructions. Confidential materials should be clearly marked as such and be emailed to Rosemary Chiavetta, Commission Secretary, rchiavetta@pa.gov, in lieu of being eFiled. Comments and reply comments should not be filed outside the stated periods for comments and reply comments.

5. The Secretary shall serve this Notice of Proposed Rulemaking Order and Annex A on all jurisdictional water utilities, the Office of the Consumer Advocate, the Office of Small Business Advocate, the Bureau of Investigation and Enforcement, the National Association of Water Companies—Pennsylvania Chapter, the Department of Environmental Protection, the Delaware River Basin Commission, the Susquehanna River Basin Commission, and the American Water Works Association—Pennsylvania Chapter.

6. The Secretary shall publish to the Commission's website this Notice of Proposed Rulemaking Order and Annex A at Docket No. L-2020-3021932.

7. The contact persons for this matter are James A. Mullins, Assistant Counsel, Law Bureau, (717) 787-5978, jamullins@pa.gov; Stephanie A. Wilson, Assistant Counsel, Law Bureau, (717) 787-1859, stepwilson@pa.gov; and Karen Thorne, Regulatory Review Assistant, Law Bureau, kathorne@pa.gov. Parties shall email electronic copies in Microsoft Word®-compatible format of their filings at this docket to these contact persons.

ROSEMARY CHIAVETTA,
Secretary

ORDER ADOPTED: November 18, 2021

ORDER ENTERED: November 18, 2021

Fiscal Note: 57-336. No fiscal impact; (8) recommends adoption.

Annex A

TITLE 52. PUBLIC UTILITIES

PART I. PUBLIC UTILITY COMMISSION

Subpart C. FIXED SERVICE UTILITIES

CHAPTER 65. WATER SERVICE

Subchapter A. SERVICE GENERALLY

(*Editor's Note:* The following section is proposed to be added and is printed in regular type to enhance readability.)

§ 65.20a. Water conservation measures.

(a) *General.* The Commission will review a water public utility's efforts to meet the criteria in this section when determining just and reasonable rates and may consider the water public utility's efforts in other proceedings.

(b) *Definitions.* The following words and terms, when used in this section, have the following meanings, unless the context clearly indicates otherwise:

AWWA Software—*AWWA Free Water Audit Software*—Version 6.0 (2020) available from Free Water Audit Software/American Water Works Association (awwa.org).

Apparent loss—An inaccuracy such as associated with metering, a data handling system error, billing, fraud, theft or other cause that did not result in an actual loss of treated water.

Authorized consumption—The volume of water used for permitted purposes such as billed customer use, firefighting, company use and any other use permitted by the water public utility.

Discrete system—A stand-alone pipe network with boundaries that encompass all sources of water and endpoints.

Large customer—A nonresidential customer exceeding the consumption volume that the water public utility has designated in its tariff as large usage.

Real loss—A physical loss of water that has been treated and placed in the distribution system. A real loss may be a measured volume or a calculated volume.

UFW—*Unaccounted-for water*—The amount of water that is "lost" when comparing the volume of water that is produced with the volume of water that is sold. This amount is adjusted by taking into account a number of factors based on a formula to estimate the amount of water used but not measured. Those factors include firefighting, hydrant flushing, main flushing, building construction, theft, inaccurate meter recording, faulty meters and leakage, among other reasons. Ongoing leakage, particularly in older systems, is the most prevalent cause of UFW. Another term for UFW is UAW.

Water supplied—Water that is treated, leaves the plant and is distributed into the system.

(c) *Water loss audit for a Class A water public utility.*

(1) A Class A water public utility shall conduct an annual water loss audit to determine real water loss volumes and apparent water loss volumes and the associated costs of each and shall file an annual water loss report with the Commission. The annual water loss report must meet all of the following criteria:

(i) Completed and filed for each discrete water system.

(ii) Based on a calendar year.

(iii) Filed with the Commission by April 30th of the following year.

(iv) Provided in a working electronic format.

(v) Verified under 66 Pa.C.S. § 504 (relating to reports by public utilities) and 52 Pa. Code § 1.36 (relating to verification).

(2) A Class A water public utility shall use a water loss audit methodology that, at a minimum, quantifies and addresses the following metrics and reporting criteria:

(i) Water supplied, in gallons.

(ii) Authorized consumption, in gallons.

- (iii) Water losses, in gallons (real and apparent).
 - (iv) Nonrevenue water, in gallons.
 - (v) Distribution system characteristics must include all of the following:
 - (A) Length of mains (in miles).
 - (B) Number of service connections (active and inactive).
 - (C) Average length of customer service line.
 - (D) Average operating pressure (in pounds per square inch).
 - (vi) Operational cost data must include all of the following:
 - (A) The total annual cost to operate the system.
 - (B) The cost of production per million gallons.
 - (C) The composite charge that customers pay per gallon of water, including service and volumetric charges, based on a calculated weighted average of individual class rates and the number of customers per class.
 - (vii) Performance indicators consisting of financial calculations and operational efficiency calculations.
 - (viii) An explanation for each reported metric value that has both:
 - (A) Varied greater than 10% in either direction from the previous year's reported value.
 - (B) Has not improved over 3 years of reporting.
 - (ix) An indication of the statistical confidence in the validity and accuracy of the values reported for each required metric and a summation of the overall validity and accuracy of the data reported.
 - (x) A description of priority areas the water public utility intends to address to reduce future water loss.
- (3) Use of the AWWA Software will satisfy the annual reporting requirements set forth in paragraph (2). A Class A water public utility may petition to use an earlier or later version of the AWWA Software or an alternate methodology provided the petition is filed 60 days before the end of the calendar year for which the alternate version or alternate methodology would be used. The Petition must set forth the proposed alternative methodology and software for review. The proposed alternative water audit methodology petition must address all metrics and criteria listed in paragraph (2) and contain all the technical and engineering formulas and metrics needed to substantiate how the alternative methodology meets or exceeds the required metrics as listed in paragraph (2).
- (4) The Commission may provide instructions regarding permissible use of later versions of the AWWA software in reminder communications regarding public utility reporting.
- (d) *Unaccounted-for water.* Each Class A, Class B and Class C water public utility shall report its unaccounted-for water using Schedule 500 of the water public utility's

Annual Financial Report to the Commission required under § 65.19 (relating to filing of annual financial reports). Levels of UFW shall be kept within reasonable amounts. Levels above 20% have been considered by the Commission to be excessive.

(e) *Leak detection.* A water public utility shall use a system of leak detection on a regular basis, with leaks being repaired as expeditiously and economically as possible and shall provide documentation of the system to the Commission upon request.

(f) *Metering.* A water public utility shall have a metering program in place and shall provide documentation of the program to the Commission upon request. A metering program, reflecting a public water utility's obligations under § 65.8 (relating to metering), must also include metering sources of supply.

(g) *Mandatory conservation contingency plan.* A water public utility shall include its mandatory conservation contingency plan reflecting its obligations under § 65.11 (relating to mandatory conservation measures) in its tariff.

(h) *Efficiency plumbing fixtures.* A water public utility shall annually notify its customers that water-saving plumbing fixtures should be installed in new and remodeling construction and as a retrofit to existing plumbing. The water public utility shall consult with the Commission's Communications Office and the Commission's Bureau of Consumer Services regarding the initial development and subsequent revisions of efficiency materials.

(i) *Education.* At least annually, a water public utility shall provide each customer with a brochure or similar type of material that discusses efficient water use practices, the expensive waste caused by leaking plumbing fixtures, the availability of retrofitting plumbing devices to curtail unnecessary water use, and the possible savings on water and fuel bills that could ensue when conservation methods are implemented. The water public utility shall consult with the Commission's Communications Office and the Commission's Bureau of Consumer Services regarding the initial development and subsequent revisions of efficiency materials.

(j) *Water audit for a large nonresidential customer.* A water public utility shall annually inform each of its large, nonresidential customers of the availability of the large water user audit procedure, developed by the Department of Environmental Protection, by means of a printed message on or with the customer's bill.

(k) *Penalty.* If a water public utility fails to file the information or undertake the actions required by this section in compliance with this section, the water public utility may be subject to a penalty as provided under 66 Pa.C.S. § 3301 (relating to civil penalties for violations). Continued failure to comply or to file annual reports may result in additional penalties.

[Pa.B. Doc. No. 22-1176. Filed for public inspection August 5, 2022, 9:00 a.m.]