

COMMONWEALTH OF PENNSYLVANIA



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February 28, 2023

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Re: Policy Statement on Public and Private Fire
Protection
Docket No. M-2022-3033054

Dear Secretary Chiavetta:

Attached for electronic filing please find the Office of Consumer Advocate's Comments in the above-referenced proceeding.

Copies have been served as indicated on the enclosed Certificate of Service.

Respectfully submitted,

/s/ Erin L. Gannon
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Certificate of Service

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CERTIFICATE OF SERVICE

Policy Statement on Public and Private : Docket No. M-2022-3033054
Fire Protection :

I hereby certify that I have this day served a true copy of the following document, the Office of Consumer Advocate's Comments, upon parties of record in this proceeding in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant), in the manner and upon the persons listed below:

Dated this 28th day of February 2023.

SERVICE BY E-MAIL ONLY

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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Policy Statement on Public and Private : Docket No. M-2022-3033054
Fire Protection :

COMMENTS OF THE OFFICE OF CONSUMER ADVOCATE
PROPOSED POLICY STATEMENT AND ORDER

The Office of Consumer Advocate (OCA) submits these Comments on the Public Utility Commission’s (PUC or Commission) Order and Proposed Policy Statement entered on November 10, 2022.

I. BACKGROUND

In June 2022, the Commission directed the Commission’s Bureau of Technical Utility Services (TUS), in conjunction with the Law Bureau, to solicit comment from Class A water utilities on the development of a proposed policy statement on public and private fire protection.¹ The Commission sought comments on (1) the use of hydraulic distribution system modeling required for fire protection and (2) fire protection service afforded by current system design requirements, and included Directed Questions on those issues. Columbia Water Company (Columbia Water), the National Association of Water Companies – Pennsylvania Chapter (NAWC), and Aqua Pennsylvania (Aqua) filed Comments.

In November 2022, the Commission entered an Order and proposed Policy Statement (Order). The Order was published in the Pennsylvania Bulletin on January 14, 2023, which established a 45-day comment period ending February 28, 2023. 53 Pa. B. 379. The Order seeks

¹ The Letter was published on July 16, 2022 and established a 60-day comment period. 52 Pa. B at 4064.

response to additional questions about the hydraulic distribution system modeling required for fire protection and the fire protection service afforded by current system design and comment on the proposed Policy Statement. Order at 7-9.

II. COMMENTS

The OCA supports the Commission's goal to ensure that the fire protection service provided by regulated water utilities is safe, reasonable, and adequate. Through its comments and responses to Commission questions, the OCA seeks to ensure that the guidelines adopted are clear, do not conflict with standards already applicable to the fire protection provided by Commission-regulated utilities, and will not impose unreasonable costs on ratepayers.

A. Commission Questions

What guidelines should water public utilities attain for the provision of regulated public fire protection service including flow, pressure, and duration of flow and pressure?

As discussed by other commenters, the Pennsylvania Department of Environmental Protection's (DEP) Public Water Supply Manual, the Uniform Construction Code, the State Insurance Services Office and the American Water Works Association (AWWA) Manual M31, among others, provide guidelines for fire protection. Columbia Water 2022 Comments at 3; NAWC 2022 Comments at 6; Aqua 2022 Comments at 4-5. The OCA agrees with other commenters that Commission guidelines should harmonize with other existing guidance to minimize costs for compliance. The OCA also recommends that any new requirements recognize operational differences between systems to avoid the example raised by Columbia Water, where oversizing a system to accommodate fire flows could negatively impact water quality, e.g. excess water age causing low disinfectant residuals and high disinfectant byproduct concentrations. Columbia Water 2022 Comments at 8.

What procedures should a public fire service provider employ should a fire protection connection not meet minimum requirements? For example, what customer notifications or public/private fire hydrant markings would be effective to denote expected levels of service from any fire protection facility?

If a fire company attempted to pump more water or for longer duration than a fire hydrant and available storage could provide, it could create negative pressures that contaminate other portions of the distribution system. To help prevent this, the OCA recommends that fire hydrants that do not provide the acceptable fire flow should be readily identifiable.² The OCA further recommends that, where the hydrant can serve a useful purpose as a blow-off hydrant, unacceptable hydrants should be marked instead of being removed.

In providing public notice regarding their marking system or public fire hydrant capacity, utilities could send that notice to customers at the same time and/or in the same manner the utility satisfies DEP requirements for delivering Consumer Confidence Reports. <https://www.dep.pa.gov/Citizens/My-Water/PublicDrinkingWater/Pages/Consumer-Confidence-Reports.aspx#.VkC7F6Mo59A>. The utility should also share this information with local fire services and municipalities. Additionally, a utility providing fire protection service should keep current information about its marking system for fire protection facilities in a publicly accessible location on its website.

With regard to private fire protection connections that do not meet minimum requirements, NAWC's recommendations for notice to property owners, municipalities and local fire departments appear reasonable:

² For example, hydrants not meeting acceptable fire flow can be visibly marked, e.g, painted or stenciled, to indicate the capacity for which they can be used. <https://www.dep.state.pa.us/dep/deputate/waterops/redesign/tablesformulas/Pages/firehydrantcolor.htm>.

If a fire protection connection cannot meet minimum requirements, the utility should notify the owner of the property, the municipality and the local fire department, preferably in writing. NAWC also recommends that the utility follow-up with the customer, possibly through meetings to discuss ways to resolve the issue.

NAWC 2022 Comments at 7.

Whether new policies concerning minimum expectations should be implemented differently for new as compared to existing fire protection facilities, public and/or private fire hydrants, private fire protection connections other than private fire hydrants (for example, sprinkler systems), etc.?

The OCA recommends that any new policies should be implemented differently for existing fire protection facilities. The OCA is concerned about the cost and disruption to customers if utilities are required to redesign and resize existing systems. The OCA agrees with Columbia Water that if new guidelines are applied to existing fire protection facilities, they should apply over time and be phased-in to minimize the cost for ratepayers. Columbia Water 2022 Comments at 9-10.

Another consideration in implementing standards that apply to PUC-jurisdictional systems relates to acquisitions of systems to which the standards have not applied, e.g. because the system is municipally owned or otherwise does not meet the criteria for Commission regulation. The magnitude of capital investment required to upgrade those systems could disincentivize regulated utilities from acquiring those systems or make acquisition not in the interest of a buyer's existing ratepayers. Columbia Water 2022 Comments at 10.

What potential adjustments to revenue requirement, cost allocation, and rate design would fire service providers require to accurately and reasonably reflect proposed changes in service conditions and management performance?

As stated above, rate impact should be considered in whether and what new guidelines for fire protection are established. There will be costs implications for main replacement and storage and pumping requirements, and additional operating costs for having sufficient water in storage

and available. *See* NAWC 2022 Comments at 8; Columbia Water Comments at 10. The OCA is also concerned about cost allocation. While cost of service for public fire protection will increase, due to the limitation on recovery from municipalities, rates for other customers will increase to subsidize 75% of that higher cost of service. 66 Pa. C.S. § 1328; NAWC 2022 Comments at 8; Columbia Water 2022 Comments at 12; Aqua 2022 Comments at 6.

B. Proposed Policy Statement

The OCA proposes certain alternative language or modifications to the provisions of the proposed policy statement set forth in Annex A to the Order. *See* Appendix A, hereto.

As a general matter, the proposed policy statement states that utilities should make determinations about minimum parameters for fire protection service and related methods, estimated schedules, analysis, notification process and record-keeping, as well as developing plans for using hydraulic models. Annex A at 2-3 (§§ 69.xx3-.xx4). The Commission states that it “will consider a water public utility’s effort to meet the recommendations in this Policy Statement when determining just and reasonable rates for the water public utility.” Annex A at 1 (§ 69.xx1(a)). The OCA requests that the Commission clarify, and include in its policy statement, a statement that the water public utility’s determinations and plans, and related claims for cost recovery, will be subject to review in the utility’s base rate cases.

1. § 69.xx1(b). General Scope and Purpose.

The OCA identified concerns regarding increased rate impact and subsidization above, relating to upgrade of existing systems and recommended taking a measured approach to ensure cost increases are reasonable. The OCA also recommends a measured approach for requiring utilities to use and maintain computerized hydraulic models. The OCA’s concerns and recommendations are discussed further below, in Section B.4. (addressing § 69.xx4(b)).

2. § 69.xx3(b)(1). Fire Protection Service Afforded by Current System Design.

As proposed, § 69.xx3(b)(1) requires a utility to determine minimum parameters for fire protection service that will apply “to all fire protection connections and fire hydrants of a water public utility.” Annex A at 2. The OCA recommends utilities should be permitted to set different minimum parameters for discrete systems (those that generate less annual revenue than a Class A water public utility). This will provide flexibility for a utility to evaluate costs and benefits on a system-by-system basis, recognizing differences in existing facilities and operating characteristics, in determining appropriate minimum parameters for fire protection service.³ To that end, the OCA proposes the following modification to § 69.xx3(b)(1):

(b) A water public utility’s operating procedures and best practices related to fire protection service should include all of the following:

(1) A determination, based on a definable basis or standard or both, of operating characteristics such as minimum flow, pressure, and duration of flow and pressure that the water public utility will consider as its minimum parameters for fire protection connections and public and private fire hydrant service. These predetermined minimum operating characteristics should be applied to all fire protection connections and fire hydrants of a water public utility, **except that a water public utility can determine different minimum parameters for each discrete system that does not meet the definition of a Class A water public utility.**

With that caveat, the OCA supports the Commission’s intent to make the minimum operating characteristics uniformly applicable to the utility’s fire protection connections and fire hydrants.

³ For example, Aqua stated that water utilities “should adhere to the standard of 500 gpm at 20 psi for 20 minutes for every hydrant in service.” Aqua 2022 Comments at 6. The ISO standard for fire protection is 500 gpm at 20 psi **for 1 hour**. *ISO Guide for Determination of Needed Fire Flow* at 26 (Insurance Services Office 2014). It may be that some of Aqua’s discrete systems could meet the ISO standard without unreasonable cost impacts for ratepayers. For other systems, a different or interim standard may be warranted due to the time and cost required to upgrade fire protection service.

Uniformity and clear messaging about the fire flow available will help to avoid the consequences of unexpectedly deficient fire flow during a fire.

3. § 69.xx3(b)(4). Fire Protection Service Afforded by Current System Design.

Consistent with its comments in Section A above, the OCA does not recommend that the PUC require all fire hydrants that do not provide service at minimum parameters to be scheduled for removal, remediation or replacement. If the hydrant can serve a useful purpose as a blow-off hydrant, the utility should have flexibility to keep it in service subject to clear marking and identification, through paint color or other clearly identifiable markings, that it is incapable of providing service at the utility's minimum parameters. The OCA suggests this modification to § 69.xx3(b)(4):

An estimated schedule to remove, remediate, or replace a fire hydrant or fire service connection found to be incapable of providing service at the water public utility's minimum parameters for fire protection connections and fire hydrant service. **Where the hydrant can serve a useful purpose as a blow-off hydrant, the water public utility can mark the hydrant rather than scheduling it for removal, remediation or replacement.**

4. § 69.xx4(b). Hydraulic Distribution System Modeling Required for Fire Protection.

The OCA supports the flexibility afforded by Section 69.xx4(c)(1) for a utility to determine whether or not to utilize computerized hydraulic modeling. For some systems, the cost of initial updates, updates for changes, and ongoing quarterly updates, plus additional staff and resources for systems that do not currently have hydraulic models, could be prohibitive. Columbia Water 2022 at 2-3; Aqua 2022 Comments at 4-5; NAWC at 3-5. Field testing may allow utilities to provide fire protection of comparable quality. Aqua 2022 Comments at 3; NAWC at 4-5.

Consistent with this recommendation, the OCA also recommends that another provision of the policy statement, § 69.xx1(b), should be modified as follows to clarify that use of computerized hydraulic modeling software is one example of a modern tool and not a requirement for all Class

A water public utilities:

(b) Class A water public utilities.

Fire protection services are often provided by Class A public water utilities. Class A water public utilities should operate with a sophisticated level of technical expertise including the use of modern water industry tools such as computerized hydraulic modeling software, **where the benefits of a computerized hydraulic model justify the costs required to build, calibrate and maintain the model.**

5. § 69.xx4(c)(4). Hydraulic Distribution System Modeling Required for Fire Protection.

The OCA recommends that, for systems where a computerized hydraulic model is used for ongoing fire protection purposes, the schedule should be based on considerations other than time. For example, it should be updated based on changes that impact the system's ability to provide fire protection service, such as changes to the locations and water demands of major customers, number of customers, increase or decrease of distribution storage or pumping capacity of sources. Another reason for an update is that a fire or normal distribution system flushing caused a water outage to some customers because this could indicate negative pressure and possible contamination by ground water.

III. CONCLUSION

The Office of Consumer Advocate appreciates the opportunity to provide these comments on the Commission's proposed Policy Statement and Order and respectfully requests that the Commission consider the OCA's recommendations. The OCA looks forward to continuing to work with the Commission, Staff, and stakeholders to ensure that fire protection service is safe, adequate and reasonable, and provided at reasonable cost to customers.

Respectfully Submitted,

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Dated: February 28, 2023
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ANNEX A

TITLE 52. PUBLIC UTILITIES
PART I. PUBLIC UTILITY COMMISSION
Subpart C. FIXED SERVICE UTILITIES
CHAPTER 69. GENERAL ORDERS, POLICY STATEMENTS AND
GUIDELINES ON FIXED UTILITIES
Section xxx COMMISSION POLICY STATEMENT ON PUBLIC FIRE
PROTECTION SERVICE AND SYSTEM HYDRAULIC MONITORING

§ 69.xx1. General Scope and Purpose.

(a) All water public utilities.

The coordination and consistent application of safe, adequate, and reliable fire protection service offers a tremendous benefit to public safety, emergency fire protection organizations, and associated personnel. Safe, reasonable, and adequate regulated fire protection service offerings are a matter of utmost concern to the Commission. The policies and recommendations in this Policy Statement are intended to provide water public utilities with a guideline of the recommended actions and level of public fire protection service and system hydraulic monitoring that the Commission considers reasonable. The Commission will consider a water public utility's effort to meet the recommendations in this Policy Statement when determining just and reasonable rates for the water public utility. **The water public utility's determinations and plans, and related claims for cost recovery, will be subject to review in the utility's base rate cases.**

(b) Class A water public utilities.

Fire protection services are often provided by Class A public water utilities. Class A water public utilities should operate with a sophisticated level of technical expertise including the use of modern water industry tools such as computerized hydraulic modeling software, **where the benefits of a computerized hydraulic model justify the costs required to build, calibrate and maintain the model.**

§ 69.xx2. Definitions.

The following words and terms, when used in this section, have the following meanings, unless the context clearly indicates otherwise:

Class A water public utility—as defined in Section 56.2 of the Commission's regulations at 52 Pa. Code § 56.2.

Computerized Hydraulic Model—a computer-based mathematical simulation used to predict the performance of a water system.

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

§ 69.xx3. Fire Protection Service Afforded by Current System Design.

(a) A water public utility's operating procedures and best practices related to fire protection services, including fire protection connections and public and private fire hydrant service, should be maintained within this Commonwealth at an office or offices of the public utility located in the territory served by it and should be open for examination by the Commission.

(b) A water public utility's operating procedures and best practices related to fire protection service should include all of the following:

(1) A determination, based on a definable basis or standard or both, of operating characteristics such as minimum flow, pressure, and duration of flow and pressure that the water public utility will consider as its minimum parameters for fire protection connections and public and private fire hydrant service. These predetermined minimum operating characteristics should be applied to all fire protection connections and fire hydrants of a water public utility, **except that a water public utility can determine different minimum parameters for each discrete system that does not meet the definition of a Class A water public utility.**

(2) A fire hydrant testing and maintenance program to ensure that all public and private fire hydrants within a discrete system are tested and exercised on a specified schedule as determined operationally and economically feasible by the water public utility.

(3) A method to clearly mark and identify each fire hydrant and each fire protection connection found to be incapable of providing service at the water public utility's minimum operating characteristics for fire protection connections and fire hydrant service.

(4) An estimated schedule to remove, remediate, or replace a fire hydrant or fire service connection found to be incapable of providing service at the water public utility's minimum parameters for fire protection connections and fire hydrant service. **Where the hydrant can serve a useful purpose as a blow-off hydrant, the water public utility can mark the hydrant rather than scheduling it for removal, remediation or replacement.**

(5) An analysis of the level of capital expenditures and associated timeframes for a water public utility to remediate, repair, or both a water system, as part of an acquisition due diligence process, required to bring the fire protection service up to at least the water public utility's acceptable operating characteristics.

(6) A written notification process to affected customers and local jurisdictions that may include property owners, the municipality and the local fire department of the location of any fire protection connection of fire hydrant that cannot meet the water public utility's acceptable operating characteristics.

(c) In conjunction with its obligations under 52 Pa. Code § 65.4 (relating to records), a water public utility that provides fire protection connections and fire hydrant service should update its maps, plans, and records to include the location of and, if feasible, the last known operating characteristics of all public and private fire hydrants.

§ 69.xx4. Hydraulic Distribution System Modeling Required for Fire Protection.

(a) Hydraulic Distribution System Modeling is a valuable aide in forecasting system capabilities under varying operational conditions.

(b) Class A water public utilities should develop and implement a plan to use and maintain computerized hydraulic models for each discrete water system.

(c) The plan should address all of the following:

(1) A determination of the minimum water system size, based upon the complexity of the distribution pipe network and water service requirements, that should have a model.

(2) An identification of the commercially available hydraulic modeling software to be used.

(3) A description of how data from the public utility's other informational databases and systems, can be integrated into the computerized hydraulic model, including geographic information, supervisory control and data acquisition, and customer information systems.

(4) A schedule by which the computerized hydraulic model will be calibrated, updated, and maintained to ensure the accuracy is sufficient to reasonably predict a system's operational behavior to a determined level of accuracy set by the water public utility.