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REPORT ON  
METERING FIRE SUPPLIES

## WATER SUPPLY BOARD

THOMAS H. DRISCOLL, CHAIRMAN

JOHN A. DOHERTY

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PROVIDENCE 8, R. I.

PHILIP J. HOLTON, JR.

CHIEF ENGINEER

JOHN T. WALSH

LEGAL ADVISOR

June 20, 1955

City Council  
City Hall  
Providence, R. I.

Attention: Mr. D. Everett Whelan, City Clerk

Gentlemen:

Upon receipt of Resolution #361, passed by the City Council in regard to private fire supplies, the Water Supply Board instructed its Chief Engineer to make a comprehensive study of facts regarding such private fire supplies.

On June 17, 1955 he presented his report to the Water Supply Board, and by the unanimous vote of those in attendance ( a quorum being present) his report was accepted and approved as the report of the Water Supply Board. The original and copy of the report is enclosed herewith for presentation to the City Council.

After careful consideration of the report presented by the Chief Engineer, the Board is of the opinion that no change should be effected in the rules and regulations of the Board; and that to change the rules with regard to private fire supplies at this time, when 77% of such installations in the system have been metered, would be most unfair and discriminatory to those who have complied with the present rules.

Respectfully submitted  
Water Supply Board

By

*John A. Doherty*  
Acting Chairman

*Ugo Riccio*  
*Earl H. Ashley*

IN CITY COUNCIL

JUL 7 1955

READ:

WHEREUPON IT IS ORDERED THAT  
THE SAME BE RECEIVED.

*D. Everett Whelan*  
CLERK



Report on Resolution Passed by the City Council at the Meeting  
on May 19, 1955 in regard to Metering of Private Fire Supplies.

The following resolution was passed by the City Council at their meeting on May 19, 1955 and approved on May 23, 1955.

"Whereas, it has come to the attention of certain members of the City Council that certain business establishments and factories using no water in their processing are required to expend an average of fifteen hundred to eighteen hundred dollars to comply with regulations of the Water Supply Board concerning the metering of pipe lines supplying sprinkler systems, which is considered impractical, unfair and inimical to good business management

Now, therefore, be it resolved that this City Council requests the Water Supply Board to reconsider its rules and regulations to eliminate this provision."

The rules and regulations governing the metering of fire supplies read as follows:

"All fire supplies shall be metered and conform to the provisions of Section 2, entitled "Meters" with the following exceptions:

a. The owner may purchase and install the meter, as directed by the Water Supply Board, provided it is a type approved by said Board and the National Board of Fire Underwriters.

"b. The owner may install an approved detector check type of meter, but the Water Supply Board reserves the right to require the owner to install a full flow fire line meter as described in preceding paragraph (a)

Property owners whose present fire supply systems do not conform to these regulations will be granted 24 months from the date of issuance (January 1, 1945) of these rules and regulations to revise their systems.

For any violation governing fire supplies, the Water Supply Board may discontinue the service immediately."

Under (b) the Board allows the owner to install what is known as a detector check type of meter. This type does not measure all the water that may pass through this service. It has a small meter in the bypass around the weighted check that only detects the unlawful use of water. For example, a 6" fire supply can discharge over 2000 gals. per minute, but only 150 gals. per minute is being metered by the disc meter in the bypass. The remainder passes through the weighted check, which has no metering facilities whatsoever.

The cost of metering a 4" fire supply with this type of installation will range from \$500 to \$600; and for the 6" from \$700 to \$800.

Under this same section, the Board reserves the right to require an owner to install a full flow fire line meter if water is used consistently for purposes other than fire protection. This style registers all water passing through the service.

The cost of a 4" full flow fire line meter would run from \$800 to \$950, and the 6" installation would average \$1500 to \$1600.

We approve the detector check type to keep the cost of installation to an absolute minimum. However, if an owner uses large quantities for unlawful purposes, he is compelled to install the more expensive type.

This resolution relates to private fire protection, which is a special service enjoyed by a comparatively small group of property owners. (Only 1.7% of the services are private fire supplies.) It should not be confused with public fire protection, which is provided for the general public and paid for out of public funds. This is private fire protection on private property that a company requests in addition to public fire protection. This special fire service reduces the cost of insurance on property from 50% to 60%.

One company that has offered strenuous objection to the metering of fire supplies has two 6" services into their building. These two services are capable of delivering water at a rate in excess of five and one-half million gallons daily. Not only is this huge quantity of water available for their private use, but the cost of their insurance premium is reduced by 50% to 60%. The second service results in further savings of over \$700 in the cost of insurance.

This company claims that they do not use any water for processing, so they should be exempt from this rule and regulation. Although they do not use water for processing, they do use water for their boilers,

toilets, wash stands, etc. Our records show they use as much as 1,461,750 gallons in a year. The department records will prove that wherever there is a private fire service to a building, water is being used for some purpose or other within the property.

Another recent case covered some mill property located in one of the outlying towns served by the system. When the owner received the notice that his fire supply would be shut off unless he installed a meter within 30 days, he contacted his insurance agent. He then informed us that the insurance company claimed the increase in cost without this service would be only 10%, and you could not justify the expense of installing a meter. We were notified to discontinue the service. The following day he called back and requested us not to terminate his fire supply as the insurance company had made an error. He stated the insurance rates on the building with a fire supply would be \$0.35 per \$100, or on a \$70,000 policy the cost would be \$235.00. On the building without a fire supply, the rate would be \$1.85 per \$100, or \$1260.00. This company now is engaged in installing the meter, and it will be paid for out of the first year's savings on their insurance. Over 100% return on the investment, all as the result of an adequate supply from the water works system.

The department's records show numerous incidents of water being used through private fire supplies for purposes other than fire and as the result of leaks in their system. The most recent occasion was a break

in a fire supply that ran under the Woonasquatucket River to a group of mill buildings. If the supply had been unmetered, the leak could have gone on indefinitely as the water discharged direct into the river, with no indication whatsoever of leakage on the surface. Fortunately, this supply was metered by a full flow fire line meter that registered 54,900,000 for a three months period. The company was billed for the entire amount passing through the meter.

Another leak occurred in a large manufacturing building in downtown Providence. For a three months period, 3,980,250 gallons passed through their private fire supply, and before the leak was repaired another 1,008,750 gallons was discharged. Here again the supply was metered by a full flow fire line meter, and the company was billed for the amount of water wasted.

Over the years there have been a few companies among the group receiving this special service that opposed all forms of regulation. Some objected to being charged for the service, others opposed metering, and there were instances where firms insisted on connecting their own fire supplies, obtained from polluted streams and rivers, into the City supply lines.

As the result of this opposition, the American Water Works Association, as early as 1902, appointed a special committee to report upon the question of Regulation and Control of Private Fire Services.



This report, presented to the members of the Association on June 13, 1902, contained the following regarding meters:

"Second:- That upon approval of the application by the proper authority, its construction shall be such as to insure an accounting of all water used. Meters for this purpose to be installed and used.

Fifth:- That all expenses incident to the installation of private fire service attachments, including the cost of meters, be borne by the applicant or owner of the property."

The A. W. W. A. Proceedings contain citations from various legal decisions in regard to the metering of Private Fire Protection Services. Page 189 A. W. W. A 1913. Opinion of Vankirk, J. in the case of Julius P. Baumann and David K. P. Baumann, etc., vs. Samuel D. Kendrick, et. al., composing Board of Water Commissioners, City of Glen Falls, Warren County, New York:

"Under the charter the City of Glenn Falls, the Board of Water Commissioners adopted Rule 22, viz., large connections for fire protection by means of automatic sprinklers or standpipes will be allowed only on written application to the Board of Water Commissioners, and all said applications must be made at least thirty days before the connection is made. All services shall be metered, and the size of the meter shall be the same as the diameter of the pipe requested."

The Court says:

"To protect against the unauthorized use of that water through this connection, the meter is a proper instrument. There is no sufficient

reason why the Board should not be permitted to have the water drawn through this connection for the sprinkling system measured, if it has authority to so require it. Section 96 of the Charter gives the necessary authority. There is no good reason why the cost of the connection and of the meter should not be paid by the property owner benefited. There seems little fairness in demanding this other use of the water for special fire purposes and also demanding that the City bear the expense of putting it in, or of the meter to guard against unauthorized use of water through this connection. The City is under no obligation to furnish plaintiffs water for such special purpose, and the owner may exercise his choice whether or not he shall use it for such purposes."

Page 762, A. W. W. A 1919 Appendix:

"Shaw Stocking Co. v. City of Lowell, 199 Mass. 118, 85 N.E. 90, involved a regulation of the water board requiring all water taken from the City's mains for private fire protection service to pass through a meter installed at the expense of the owner of the premises. The City made no charge for water used in extinguishing fires, and the sole object of the rule was to prevent surreptitious or careless use of the water for other purposes. The rule was put in force gradually, beginning with the most important cases.

"It was held that there is nothing unreasonable in requiring plaintiff to pay for the installation of a meter in its private fire service pipes, since defendant has afforded reasonable facilities for extinguishing fires

by public hydrants; and if plaintiff desires a private system for further protection of its own property, it is not unfair to require it to install a meter so that the City may have means of checking wastage. The duty to supply water at reasonable rates to all takers without discrimination does not carry with it the obligation to supply water free of charge for plaintiff's private system of safeguarding its property"

Any change in our meter program would result in a very serious loss of revenue to the department. In the late '30's, we accounted for less than 70% of the water delivered into the system. As a result of our present up-to-date meter program, we receive payment for over 90% of the water discharged from the Purification Plant. This has provided the department with additional funds, allowed us to absorb the constantly increasing cost of labor and material, and enabled us to continue to sell water at the low rates that have been in effect, without change, since 1923. Certainly this cannot be classified as "unfair and inimical to good business management".

The system as a whole is 99.3% metered. There are 56,545 services that supply residential, industrial and commercial properties, and over 54,000 of the services are residential. Included in this total are 975 private fire services. Only 753 are metered, representing 77.2%.

Any change in our present rules that would provide some flexibility in regard to the installation of meters would leave the department wide open to charges of discrimination. A flexible rule could be considered as

granting favors to certain individuals, and would leave those responsible for the meter program subject to charges of corruption and dishonesty. Every effort was made to avoid situations of this nature when the rules were prepared originally and approved by the Board. Under "Foreword" the first paragraph reads as follows: "This booklet has been prepared to establish a better understanding between the department and the citizens in the various communities served by the City of Providence system. The rules and regulations embody a uniform practice governing the department for the installation of services, meters, water mains, and miscellaneous services rendered. They are intended to define the obligation of the department to the consumer and of the consumer to the department."

*Philip J. Holton, Jr.*  
Philip J. Holton, Jr.  
Chief Engineer

June 2, 1955

APPROVED

*John A. Doherty*  
John A. Doherty, Acting Chairman

*Ugo Riccio*  
Ugo Riccio

*Earl H. Ashley*  
Earl H. Ashley

IN CITY COUNCIL  
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