

**TOWN OF WOLFEBORO
BUDGET COMMITTEE
October 25, 2017
Minutes**

Members Present: John MacDonald, Chairman, Bob Tougher, Vice-Chairman, Luke Freudenberg, Selectmen's Representative, Brian Black, Bob Loughman, Harold Parker, John Burt, Steve Johnson, Bob O'Brien, Members.

Member Absent: Robert Moholland, Member.

Staff Present: Jeff Urquhart, Human Resources Coordinator, Lee Ann Hendrickson, Administrative Secretary.

Chairman MacDonald opened the meeting at 6:33 PM at The Great Hall.

I. Consideration of Minutes

September 13, 2017

Corrections:

Page 2, 14th paragraph; strike "sewer" & replace with "septage"

Page 3, 11th paragraph; insert "dry" between "a" & "cleaning"

Page 4, 1st paragraph; strike "confirmed there is no impact to the" & replace with "questioned the relationship of the issues of the commercial docks with the"

Page 2, add new 4th paragraph; "Dave Ford stated I didn't understand."

It was moved by Bob Tougher and seconded by Robert Loughman to approve the September 13, 2017 Wolfeboro Budget Committee minutes as amended. John MacDonald, Harold Parker, Steve Johnson, Robert Loughman, Bob O'Brien, Bob Tougher, Brian Black voted in favor. John Burt abstained. The motion passed.

II. Discussion Items

a. 2017-2018 Draft Budget Review Meeting Schedule

The Committee reviewed and accepted such; Harold Parker stated he would be unable to attend the 11/14/17 and 11/15/17 meetings.

b. 2018-2027 CIP

Bob Tougher recommended the Committee review the spreadsheet provided in the CIP; noting there have been some changes since his presentation of such on 9/13/17. Referencing the Route 28 Committee (addressing from Alton Town Line to Linda's Flowers) that was formed following a 2011 warrant article, he stated the layout of Section 5 of the plan (Pickering Corner to Linda's Flowers) resulted in another warrant article in 2013 now known as the Center Street project. He stated there were several stakeholders meetings in 2011 and the committee has now been reactivated; noting the State notified the Town that they intend to renovate Route 28 from the Alton town line to Pickering Corner in 2024 and requested an engineering study for such in 2018. He stated the committee has met three times recently and public input is expected for January and February; noting the three

options being considered for Pickering Corner is to leave the intersection as it currently exists, install a traffic light or install a traffic circle; noting the latter would severely impact the businesses on the corners of Pickering Corner. He stated he is adamant that he does not want a traffic light or circle and noted three of the members are interested in a traffic circle and six would like the intersection to remain as is. Referencing his Budget Committee representation on the CIP, he stated he would like to take a break from such next year.

John MacDonald questioned the number of warrant articles resulting from the CIP.

Bob Tougher stated the number of warrant articles is similar to the number noted in his 9/13/17 report to the Committee. He noted the Solid Waste Facility warrant article has been pushed out to 2019.

c. Hydrant Fee

John MacDonald stated the Committee reviewed the hydrant fees as a group and agreed to support and set a rate of 17.5% for the hydrant fee in the 2018 budget (9/13/17 Budget Committee minutes). He stated the BOS put forth a news release stating the BOS would sponsor a warrant article requesting an additional \$31,000 in 2018 to restore the rate to 20%, see attached News Release. He requested input from the Committee regarding such and questioned whether the Committee should rescind its vote taken at the 9/13/17 meeting. He stated the Committee does not have the support of the BOS.

Luke Freudenberg stated the BOS felt that the voters should have the opportunity to vote on how it is funded. He stated based on the information presented by Underwood Engineers the BOS opted to put forth a warrant article for a rate of 20%.

John Burt stated he hopes the Committee does not support the BOS' warrant article; noting the hydrant fee is an operating budget item and should not be in a warrant article.

Bob Tougher stated he disagrees with Mr. Freudenberg and that writing a warrant article to raise an operating budget line item undermines the Budget Committee. He stated if such is not illegal then it is highly inappropriate. He stated that if the warrant article is to be pursued, the proper place to increase and amend the line item is at the Deliberative Session.

It was moved by Bob Tougher and seconded by Robert Loughman to rescind the Budget Committee's vote taken on 9/13/17 to set the hydrant fee at 17.5%.

Discussion of the motion:

Steve Johnson stated he is having a hard time understanding the tug of war associated with the 17.5% versus 20%.

John MacDonald stated the focus is on the water rate and not a formula to base the rate percentage on.

Luke Freudenberg stated the percentage is an arbitrary number and the Town has been told that the rate could be between 5% and 30%. He stated the question is where Wolfeboro fits in. He stated the BOS deals with water rates and followed Underwood Engineer's recommendation. He stated there is no ill will and would forward the Deliberative Session idea to the BOS.

Bob Tougher stated the motion has to be entertained at the Deliberative Session as an increase to the hydrant fee in the Fire Department's budget. He stated the purpose of the fee is to install, repair and maintain the water system; noting Underwood Engineers stated the purpose of the water tanks is for hydrants and fees associated with the maintenance of such. He stated he reviewed the 25 year average for hydrant fees; noting 17.5% represented a compromise. He stated the water budget in 1998 was \$883,365 and the hydrant fee was \$50,000 and in 2017 the water budget is 1,772,357 (doubled) and the hydrant fee is 300,000 (six times greater). He stated he feels the Budget Committee is being used as a scapegoat and the Committee's action contributed to the increase in water rates. He stated a bulk of the asset management plan can be pushed out a few years because the debt service will be dropping; noting the current debt service is \$738,144, representing 42%. He stated he doesn't think the water budget needs to be subsidized by the hydrant fee; noting the BOS want 360,000 for the budget which is \$.18/\$1,000 for people who are not on Town water or near hydrants. He stated he agrees with Mr. MacDonald that the 20% figure is unfair to the taxpayers.

Bob O'Brien reviewed the following information stated by Mr. Ford at the Committee's 9/13/17 meeting; 5500 households of which 2,300 are on water and 1,000 are on sewer.

Brian Black noted commercial properties are also impacted. He stated he voted against the motion at the 9/13/17 meeting because the initial argument was that the 20% was an arbitrary figure however, he felt that 17.5 was also an arbitrary figure. He stated the figure exists to buffer the rates of the users. He noted Wolfeboro has one of the highest rates in NH. He stated he disagrees with the BOS' action to put forth a warrant article and agreed that the Deliberative Session would be more appropriate for the action.

Robert Loughman stated more attention should be put towards fixing the lost water.

Luke Freudenberg stated the water loss continues to decrease; noting the Public Works Department has made great stride in reducing the I&I.

Robert Loughman stated that until the Town improves the infrastructure why the fee should be subsidized.

Brian Black questioned whether the consumers could absorb a spike in the water rates.

Bob Tougher stated there doesn't need to be a spike in the rates and would like to address the rate issue following the Committee's meeting with the Fire Department.

It was moved by Bob Tougher and seconded by Robert Loughman to rescind the Budget Committee's vote taken on 9/13/17 to set the hydrant fee at 17.5%. All members voted in favor. The motion passed.

John MacDonald stated he has researched the issue and reviewed the following publications (see attached); Public Fire Protection Maine Public Utilities Commission, Water Works Association Principles of Water Rates, Fees and Charges and NH Regulated Water Systems. He stated the Committee could further discuss the issue during the budget review process.

III. Town Manager Report

None.

IV. Other Business

Luke Freudenberg reported that the Center Street Project has started; noting the project will break for the winter and begin again next fall. He stated the Foss Field Pavilion is currently being constructed; noting the project is on schedule and under budget.

Brian Black questioned Gene's Head Beach remediation.

Luke Freudenberg stated the stormwater treatment program has begun and will be completed by year end. He stated the Rust Pond mitigation project will not be completed this year.

V. Informational Items

None.

VI. Public Comment

None.

It was moved by Bob Tougher and seconded by Steve Johnson to adjourn the October 25, 2017 Budget Committee meeting. All members voted in favor.

There being no further business before the Committee, the meeting adjourned at 7:30 PM.

Respectfully Submitted,

Lee Ann Hendrickson

Lee Ann Hendrickson

NEWS RELEASE

Wolfeboro Selectmen Approve 2% Water Rate Increase

The Wolfeboro Board of Selectmen, acting at their meeting on October 4, 2017 voted to approve a 2% increase in the Town's water rates, effective January 1, 2018. This 2% rate adjustment will increase the monthly minimum user charge for those using 1,500 gallons of water per month from \$20 to \$20.40. It will also increase the charge per 1,000 gallons over the minimum of 1,500 gallons to \$10.73. See new Water and Sewer Rate Schedule attached.

Based on analysis and options provided by Underwood Engineers, Town staff recommended a 4.5% water rate increase based on two components: (1) a 2% increase based on increased costs for operating the water system, and the need to begin setting funds aside to fund the asset management plan for the water system, and (2) an additional 2.5% to cover the deficit in the water fund budgets caused by a reduction in the General Fund's contribution to the Water Fund to provide fire protection for the Town (sometimes called the hydrant fees).

The Board of Selectmen opted to approve the 2% increase to cover the increased costs of operating the water system, but deferred acting on the remaining 2.5% increase at this time, preferring instead to seek to restore General Fund support for the Water Fund by means of a warrant article. Accordingly, the Board of Selectmen will sponsor a warrant article requesting an additional appropriation of \$31,000 in 2018, with the goal of restoring the General Fund's support of the Water system to 20% over two years, instead of 17.5% where it has been set by the Budget Committee. If the warrant article is approved by the voters in March, 2018 it will not be necessary to revisit the water rates in 2018.

Town of Wolfeboro, NH
PO Box 772
Wolfeboro, NH 03894-0772

Business Office: 84 South Main Street
Office Hours: Monday – Friday 8 a.m. – 4 p.m.
Telephone: (603) 569-8150, 8183, 8158, Fax: (603) 569-8167

Water and Sewer Rate Schedule

Effective Date: January 1, 2018

Billing Date: February 1, 2018

| <u>Water</u> | <u>Unit Charge*</u> <u>Per Month</u> | <u>Per 1,000</u> <u>Gallon Charge</u> |
|--------------------|---|--|
| 0 – 1,500 gallons | \$20.40 | \$.00 |
| Over 1,500 gallons | | \$10.73 |
| <u>Sewer</u> | | |
| 0 – 1,500 gallons | \$20.00 | \$.00 |
| Over 1,500 gallons | | \$16.15 |
| <u>Septic</u> | | |
| Effective 1/1/98 | \$.10 per gallon | |

*Based on 5/8" meter. Refer to chart below for appropriate unit charge.

Monthly Unit Charge by Meter Size

| <u>Meter Size</u> | <u>Water</u> | <u>Sewer</u> |
|-------------------|---------------|---------------|
| 5/8" | \$ 20.40 | \$ 20.00 |
| 3/4" | \$ 20.40 | \$ 20.00 |
| 1" | \$ 28.56 | \$ 28.00 |
| 1 1/2" | \$ 36.72 | \$ 36.00 |
| 2" | \$ 59.16 | \$ 58.00 |
| 3" | \$ 224.40 | \$ 220.00 |
| 4" | \$ 285.60 | \$ 280.00 |
| Seasonal | \$ 193.80 | \$ 190.00 |

Monthly water/sewer billing approved by Board of Selectmen August 7, 2013
Rates approved by Board of Selectmen October 4, 2017.

OTHER CHARGES

Manual Reading Charge – Approved by Board of Selectmen 08/07/13

A charge of \$25.00 per month will be billed for each manual reading.

Deduct Meter Charge – Approved by Board of Selectmen 09/04/13

Effective with the April, 2014 bill, a charge of \$5.00 per month will be billed for each deduct meter.

Disconnect/Reconnect Charges – Effective 01/01/99

A charge of \$50.00 will be billed for each disconnection or reconnection of service.

A forty-eight (48) hour notice by the customer is required for this service.

Hydrant Rental Charges – Approval Annual with Budget

17.5% of gross appropriations of Water Budget

Connection Charge Schedule

Approved by Board of Selectmen October 19, 2007

Effective Date: October 19, 2007

Connection charges include installation of service within 30 feet from main line.

Water (including seasonal)

| | |
|--|------------|
| 1. Residential up to 3 bedrooms | \$6,000.00 |
| 2. Residential 4 bedrooms | \$8,000.00 |
| 3. Residential over 4 bedrooms (per bedroom) | \$2,000.00 |
| 4. Commercial, Industrial, all other Non-residential (per gallon, \$6,000.00 minimum) | \$ 13.00 |

Sewer

| | |
|--|------------|
| 1. Residential up to 3 bedrooms | \$6,000.00 |
| 2. Residential 4 bedrooms | \$8,000.00 |
| 3. Residential over 4 bedrooms (per bedroom) | \$2,000.00 |
| 4. Commercial, Industrial, all other Non-residential (per gallon, \$6,000.00 minimum) | \$ 13.33 |

Note: Connection charge for commercial, industrial, and all other non-residential water and sewer users will be calculated on the basis of the daily flow volume assigned to the proposed type of use in the New Hampshire Department of Environmental Services' Subdivision and Individual Sewage Disposal System Design Rules, Chapter Env-Ws 1008.03.

HISTORICAL PERSPECTIVE

The concepts, policies, procedures, and practices related to fire protection service charges have evolved over the past 100 years. During this period, numerous papers that present differing theories and opinions on establishing rates and charges have been published and debated. In 1888, F.L. Fuller wrote the first paper published by AWWA on the subject of fire service rates and charges. This was followed in 1911 by a study by Metcalf, Knichling, and Hawley proposing that costs be prorated between general water service and fire service based on the comparison of the capacity of the facilities required. Robert Nixon published a paper in 1937 that suggested an allocation between general water service and fire service based on a capacity-ratio method.

In 1955, L.A. Root and T.R. Camp determined that systems without a fire protection function should be designed to meet peak loads, and a system designed to include fire protection should be sized to meet the maximum-day demand plus required fire flow demands. The authors noted that the cost of distribution piping is not proportional to capacity, and they argued that the cost of the fire system should be equal to the incremental cost associated with fire protection.

In 1961, the Maine Water Utilities Association Committee on Fire Protection Charges published a report that included a curve that indicated the percentage of total revenue allocated as fire protection costs, based on the number of customers served. An adaptation of this curve is shown on Figure 30-1.

In 1967, the Maine Public Utilities Commission adopted the use of this curve. Its regulations state that, except under extraordinary circumstances, fire protection charges will be no more than 30 percent nor less than 5 percent of gross revenues. In 1990, the Maine Public Utilities Commission adopted amendments to its regulations that clarified that the percentage of the revenue established by the curve applies to public fire protection services. The amendments also set forth procedures to determine private fire protection charges based on demand requirements. As an alternative to the use of this curve, utilities are permitted to prepare fully allocated cost-of-service studies.

In general, three approaches have been used in allocating costs to fire protection. They include:

- allocating primary cost to general water service, with incremental costs allocated to fire protection service
- allocating primary cost to fire protection service, with incremental costs allocated to general water service
- allocating costs to general water service and fire protection service on a proportional basis

The use of each approach results in a significantly different allocation to fire protection service. Section II of this manual illustrates the use of the last method—allocation on a proportional basis. This method recognizes that the dual function of water systems—to provide basic water service and to provide a readiness-to-serve capacity for fire protection—are equally important.

PUBLIC VERSUS PRIVATE FIRE PROTECTION

Utilities typically provide fire protection services in two distinct ways. The first level of service, public fire protection, is provided to all customers on a community-wide basis through public fire hydrants located throughout the water system.

REGULATED WATER SYSTEMS

| Company | No. of Customers | Area Served |
|---------------------------------|------------------|--|
| Abenaki Water Company-Belmont | 158 | Limited area of Belmont |
| Abenaki Water Company-Bow | 95 | Limited area of Bow |
| Abenaki Water Company-Rosebrook | 410 | Limited areas of Carroll, Bethlehem and Crawford's Purchase |
| Aquarion Water Company | 9,418 | Towns of Hampton, North Hampton; limited area of Rye |
| Bow Lake Estates | 41 | Limited area of Strafford |
| Forest Edge | 43 | Limited area of Conway |
| Fryeburg Water | 68 ¹ | Limited area of Conway |
| Hampstead Area Water | 3,578 | Limited areas of Atkinson, Chester, Danville, East Kingston, Fremont, Hampstead, Kingston, Newton, Nottingham, Plaistow, Salem and Sandown |
| Lakes Region Water | 1,690 | Limited areas of Campton, Conway, Freedom, Gilford, Laconia, Moultonborough, Ossipee, Tamworth, Thornton, and Tuftonboro |
| Mill Brook Village Water System | 38 | Limited area of Thornton |
| Pennichuck Water Works | 28,076 | City of Nashua, Town of Amherst, limited areas of Bedford, Derry, Epping, Hollis, Merrimack, Milford, Newmarket, Newton, Plaistow, Salem and Tyngsborough MA |
| Pennichuck East Utility | 7,473 | Towns of Litchfield, Pelham, Windham, limited areas of Atkinson, Barnstead, Bow, Chester, Conway, Derry, Exeter, Hooksett, Lee, Londonderry, Middleton, Plaistow, Raymond, Sandown, Tilton and Weare |
| Pittsfield Aqueduct | 637 | Town of Pittsfield |
| Tioga River | 60 | Limited areas of Belmont and Gilford |
| West Swanzey Water Co. | 84 | Limited area of Swanzey |
| Wildwood Water | 49 | Limited area of Albany |

¹ New Hampshire customers only

NH PUBLIC UTILITIES COMMISSION
WATER COMPANY ANNUAL RATES
 (July 2016)
Alphabetical Listing

| | |
|---|------------|
| Abenaki Water Company-Belmont | \$969.68 |
| Abenaki Water Company-Bow | \$1,372.69 |
| Aquarion Water Co | \$609.76* |
| Bow Lake Estates | \$392.52 |
| Dockham Shores | \$856.32 |
| Forest Edge | \$586.72 |
| Fryeburg | \$292.40 |
| Hampstead Area Water | \$561.76 |
| Lakes Region Water | |
| Metered Consolidated | \$917.60 |
| Unmetered Consolidated | \$625.56 |
| Mill Brook Village Water System | 620.20 |
| Pennichuck Corporation | |
| Pennichuck Water Works | \$550.67* |
| Pennichuck East Utility | |
| Birch Hill | \$1,308.00 |
| Locke Lake | \$951.72 |
| Sunrise Estates | \$884.28 |
| All other systems (non-North Country) | \$755.40 |
| Pittsfield Aqueduct | \$864.12 |
| Rosebrook Water | \$587.92 |
| Tioga River Water | |
| Gilford Village | \$503.80 |
| Tioga River | \$1,275.76 |
| West Swanzey | \$489.08 |
| Wildwood | \$522.00 |

Rates are based on 5/8" meter and typical year-round residential consumption of 8800 cubic feet per year.

* Aquarion Water Co. includes current WICA surcharge of 3.99%.
 Pennichuck Water Works includes current WICA surcharge of 3.03%

NH PUBLIC UTILITIES COMMISSION
WATER COMPANY ANNUAL RATES

(July 2016)
Listing by Rates

| | |
|--|----------------|
| Fryeburg | \$292.40 |
| Bow Lake Estates | \$392.52 |
| West Swanzey | \$489.08 |
| Tioga River Water: Gilford Village..... | \$503.80 |
| Wildwood..... | \$522.00 |
| Pennichuck Corp.: Pennichuck Water Works..... | \$550.67 * |
| Hampstead Area Water..... | \$561.76 |
| Forest Edge..... | \$586.72 |
| Rosebrook Water..... | \$587.92 |
| Aquarion Water Co | \$609.76 * |
| Mill Brook Village Water System | \$620.20 |
| Lakes Region: Unmetered Consolidated | \$625.56 |
| Pennichuck Corp.: Pennichuck East Utility: non-North Country | \$755.40 |
| Dockham Shores..... | \$856.32 |
| Pennichuck Corp.: Pittsfield Aqueduct..... | \$864.12 |
| Pennichuck Corp.: Pennichuck East Utility: Sunrise Estates..... | \$884.28 |
| Lakes Region: Metered Consolidated..... | \$917.60 |
| Pennichuck Corp.: Pennichuck East Utility: Locke Lake | \$951.72 |
| Abenaki Water Company-Belmont..... | \$969.68 |
| Tioga River Water: Tioga River..... | \$1,275.76 |
| Pennichuck Corp.: Pennichuck East Utility: Birch Hill..... | \$1,308.00 |
| Abenaki Water Company-Bow..... | \$1,372.69 |

Rates are based on 5/8" meter and typical year-round residential consumption of 8800 cubic feet per year.

* Aquarion Water Co. includes current WICA surcharge of 3.03%.
Pennichuck Water Works includes current WICA surcharge of 3.99%.

Chapter 69: DETERMINATION OF FIRE PROTECTION REVENUES FOR WATER UTILITIES

SUMMARY: This rule establishes a formula for determining for ratemaking purposes the percentage of gross revenues that water utilities should derive from fire protection charges.

1. Definitions.

- A. "Fire Protection Allocation Curve" means the curve established from studies done by the Maine Water Utilities Association, as described in its Journal of March 1961, and attached to this Rule.
- B. "Peak Flow" means the peak hourly flow in gallons per minute for the utility's system. In cases where the peak hourly flow cannot be readily determined, it shall be estimated on the basis of 2 1/2 times the average daily flow in gallons per minute.
- C. "Required Fire Flow" shall be determined by the National Board of Fire Underwriters (N.B.F.U.) formula $1020 \times (1 - .01 \times X)$ in gallons per minute, where X is the population in thousands served by the utility.
- D. "Standard Allocation Method" is the method of determining the percentage of a utility's gross revenue to be derived from public fire protection charges as determined by Section 2 of this Rule.

2. Determination of Percentage of Gross Revenue for Fire Protection Charge.

To determine the percentage of gross revenue that a water utility shall allocate to public fire protection charges, it shall first determine the fraction in which Peak Flow is the numerator and Required Fire Flow is the denominator. This fraction shall then be plotted on the Fire Protection Allocation Curve, attached as Appendix A. The applicable percentage is read at the point where the fraction determined above, as plotted on the horizontal axis of the Fire Protection Allocation Curve, intersects the vertical axis of the curve.

The allocation shall be as determined by the curve, except as follows:

- A. In no event shall the percentage of gross revenue allocated to fire protection charges be more than 30%, or less than 6%, of gross revenue, unless either (1) the utility proves to the Commission, by such studies as the Commission may require,

that such extraordinary percentages are reasonable and necessary; or (2) that an allocation factor of more than 30% has been accepted by the municipality and approved by the Commission and conditions have not materially changed.

- B. The Commission finds, on the basis of evidence presented to it, which may include the allocation factor approved by the Commission in the utility's last rate case, that a different allocation factor should be used because of an inadequate fire flow or other good cause.

3. Full Allocation Studies.

- A. As an alternative to using the Standard Allocation Method, a utility may prepare and present to the Commission for its consideration a full allocation study of its own system. Utilities are encouraged to prepare and present such studies when there are conditions on their system, such as extensive treatment facilities, that would make the application of the Standard Allocation Method unreasonable or inappropriate.
- B. The Commission may order a utility to prepare and present to it for its consideration a full allocation study of the utility's system when it determines that application of the Standard Allocation Method would be unreasonable or inappropriate.

4. Charges for Public Fire Protection for New Extension.

Until the date of completion of its next general rate case proceeding, a utility, other than a utility that has chosen to make no new investments in new extensions pursuant to 35-A M.R.S.A. § 6106, following the effective date of its decision not to invest pursuant to that section, may bill to the municipality, or the public authority, the charge for public fire protection on a new main extension constructed in a municipally accepted public way after the effective date of the rule to which extension the first customer was connected after February 1, 1987, pursuant to the following formula:

$$\text{TACR} \times \text{FP}$$

Where

TACR = Total average annual customer revenue for all customers connected directly to the extension, including public fire protection, as defined in Chapter 65, §1(F).

FP = Percentage of utility's revenue requirement for fire protection determined pursuant to Section 2, above, or as otherwise ordered by the Commission.

Hydrants on a public way shall be installed at the spacing or locations agreed upon by the utility and the municipality when the extension is constructed, but the charges shall apply whether or not any hydrants are located on the main extension.

Until such time as the way on which a hydrant is located is accepted by a municipality or the municipality accepts responsibility for a hydrant as a public hydrant, the hydrant shall be considered private fire protection and shall be billed accordingly.

Any tariff provision that conflicts with this rule shall be null and void.

5. Charges for new public hydrants on mains to which the first customer was connected on or before February 1, 1987.

Until the date of completion of its next general rate proceeding, a utility may bill to the municipality, or other public authority, the charge for public fire protection for new hydrants installed on mains to which the first customer was connected on or before February 1, 1987, pursuant to the following formula:

The formula for determining the annual charge (AC) for a non-investor owned utility is:

$$AC = CH \times [C + P + .02]$$

The formula for determining the annual charge (AC) for an investor-owned utility is:

$$AC = CH \times \left[CD + \frac{CE}{1 - (FIT - (FIT \times SIT) + SIT)} + .02 \right]$$

Where:

AC = Annual charge for a new hydrant on a main to which the first customer was connected on or before February 1, 1987.

C = Overall cost of capital for non-investor owner utilities, expressed as a decimal. Unless otherwise approved or set by the Director of Finance or the Commission, the cost of capital shall be the average interest rate for the first 15 years of the most recent issues of the Maine Bond Bank for a serial bond, assuming equal annual principal payments.

CH = cost of the hydrant.

CD = Cost of debt for an investor-owned utility, weighted by the debt ratio, expressed as a decimal. Unless otherwise approved or set by the Director of Finance or the Commission, the cost of debt and the debt ratio shall be those approved in the utility's most recent rate case.

CE = Cost of equity, weighted by the equity ratio, expressed as a decimal. Unless otherwise approved or set by the Director of Finance of the commission, the cost of equity and the equity ratio shall be those approved in the utility's most recent rate case.

FIT = The utility's marginal federal income tax rate allowed in its most recent rate case, expressed as decimal, unless a different tax rate is approved or set by the Director of Finance or the Commission.

P = Principal payment percentage annually, expressed as a decimal. Unless a different amount is approved or set by the Director of Finance or the Commission, the amount shall be .067 (15 years).

SIT = The utility's marginal state income tax rate allowed in its most recent rate case, expressed as a decimal, unless a different tax rate is approved or set by the Director of Finance or the Commission.

Until such time as the way on which a hydrant is located is accepted by a municipality or the municipality accepts responsibility for the hydrant as a public hydrant, the hydrant shall be considered private fire protection and shall be billed accordingly.

Any tariff provision that conflicts with this rule shall be null and void.

6. Application.

- A. This rule will govern the rate design of all rate filings made by water utilities after the effective date of the rule, whether filed pursuant to 35-A M.R.S.A. §§307 and 309 or §§307 and 6104. Utilities will not be required by reason of this rule to file for a change of rates existing on the effective date of this rule, unless required by Commission order under 35-A M.R.S.A. §1306 after a §1303 investigation.
- B. Rates filed pursuant to 35-A M.R.S.A. §§307 and 6104 after the effective date of the rule that do not conform with the provisions of the rule shall be considered unreasonable and not take effect, unless substantiated by an acceptable allocation study for the utility's system. The Technical Analysis Division of the Commission will review all §6104 rate filings to determine compliance with this rule and shall notify the utility if there is non-compliance with the rule. After receipt of this notice, the utility shall not charge its new rates until new rates have been filed pursuant to §§307 and 6104 that are in compliance with this rule, or the Commission, after a hearing requested by the utility, finds that they are in compliance with this rule.
- C. In cases where a utility serves more than one municipality, it may allocate to each municipality served a percentage of the total public fire protection revenues that it

is entitled to collect on the basis of that municipality's percentage of the total number of hydrants served by the utility.

7. The Commission, for good cause shown may waive the application of any provisions of this rule.
-

STATUTORY AUTHORITY: 35-A M.R.S.A. §§111, 301, 502, 104 and 1301.

EFFECTIVE DATE:

August 10, 1987

AMENDED:

This rule was approved by the Secretary of State on December 14, 1987 and will be effective on December 19, 1987.

EFFECTIVE DATE (ELECTRONIC CONVERSION):

May 4, 1996

NON-SUBSTANTIVE CHANGES:

March 26, 1999 - converted to MS Word.

November 9, 1999 - removal of duplicate words in Summary.

Public Fire Protection

Stephani Morancie

Lucretia Smith

Maine Public Utilities Commission

Why Public Fire Protection

- Many water utilities in Maine were originally developed to provide fire protection
 - Drinking water was a secondary consideration.
- A water source, storage tank, water mains and hydrants provided higher volume fire flow than fire trucks and (in some old cases) bucket brigades.

Not Hydrant Rentals!

- One of the most common misperceptions about fire protection charges is that they are essentially “hydrant rentals.”
- When this term is used, it does not acknowledge the other important infrastructure that makes up a water utility.
- Without this infrastructure, the water could never get to the hydrant.

Not Hydrant Rentals!

- Common water utility infrastructure:
 - Water source (well, pond, river)
 - Water treatment (filtration, chlorination, etc)
 - Pumps
 - Water mains
 - Storage tanks (provide pressure and large amounts of water)
 - Hydrants.

Not Hydrant Rentals!

- When a water utility is chartered to provide fire protection, the utility is often 2-3 times larger than if it provided drinking water alone.
- Why use treated water for fire protection?
 - Would need to design, build, operate & maintain 2 separate systems
 - Cost prohibitive
 - What happens to the fire system when not in use?

Fire Protection Charges

- Why should the municipalities pay for fire protection charges?
 - Most of the important municipal services are in town centers, as are most water utilities.
 - If a school, town office, or other municipal building should burn, the entire town could pay higher taxes for rebuilding.
 - Fire protection provided by local water utilities helps safeguard the buildings that all taxpayers use.
 - Sometimes a decrease in insurance rates when fire protection available.

Chapter 69

- Determines the percentage of gross revenues that a water utility can derive from fire protection charges.
- Water utilities have 2 options for determining this percentage:
 - “The Curve” – Standard Allocation Method
 - Allows between 6% and 30%
 - Developed because Full Allocation Studies cost prohibitive
 - Full Allocation Studies
 - Often called Cost of Service Studies.
- Some utilities have been granted higher % with Commission approval and municipality has agreed to higher %.

“The Curve”

- Allocation of fire protection charges has been formally studied for about 120 years.
 - AWWA Proceedings, 1888, Fuller
 - AWWA Journal, December, 1937, Nixon
 - NEWWA Journal, March, 1955, Root & Camp
 - MWUA Journal, March, 1961, Committee
 - MPUC Rules, December, 1987, Chapter 69

“The Curve” – A History

- A small water utility will tend to have higher fire protection costs
 - If have a population of 1000, average demand would be ~ 40 gpm with a peak ~100 gpm
 - Fire demand could be 1000 gpm or more
 - Must size system to meet the fire demand.
- Large water utilities tend to have smaller fire protection costs
 - Larger population, average demand would be higher, but not necessarily higher fire demand.

“The Curve” – A History

- Some studies have suggested that the fire protection cost should be the difference between the cost of the system with fire protection and the cost without.
- Maine Water Utilities Association did a study in March 1961
 - Looked at the previous studies
 - Determined the Curve based on allocation studies of 7 utilities, varying by size by 500 to 140,000.

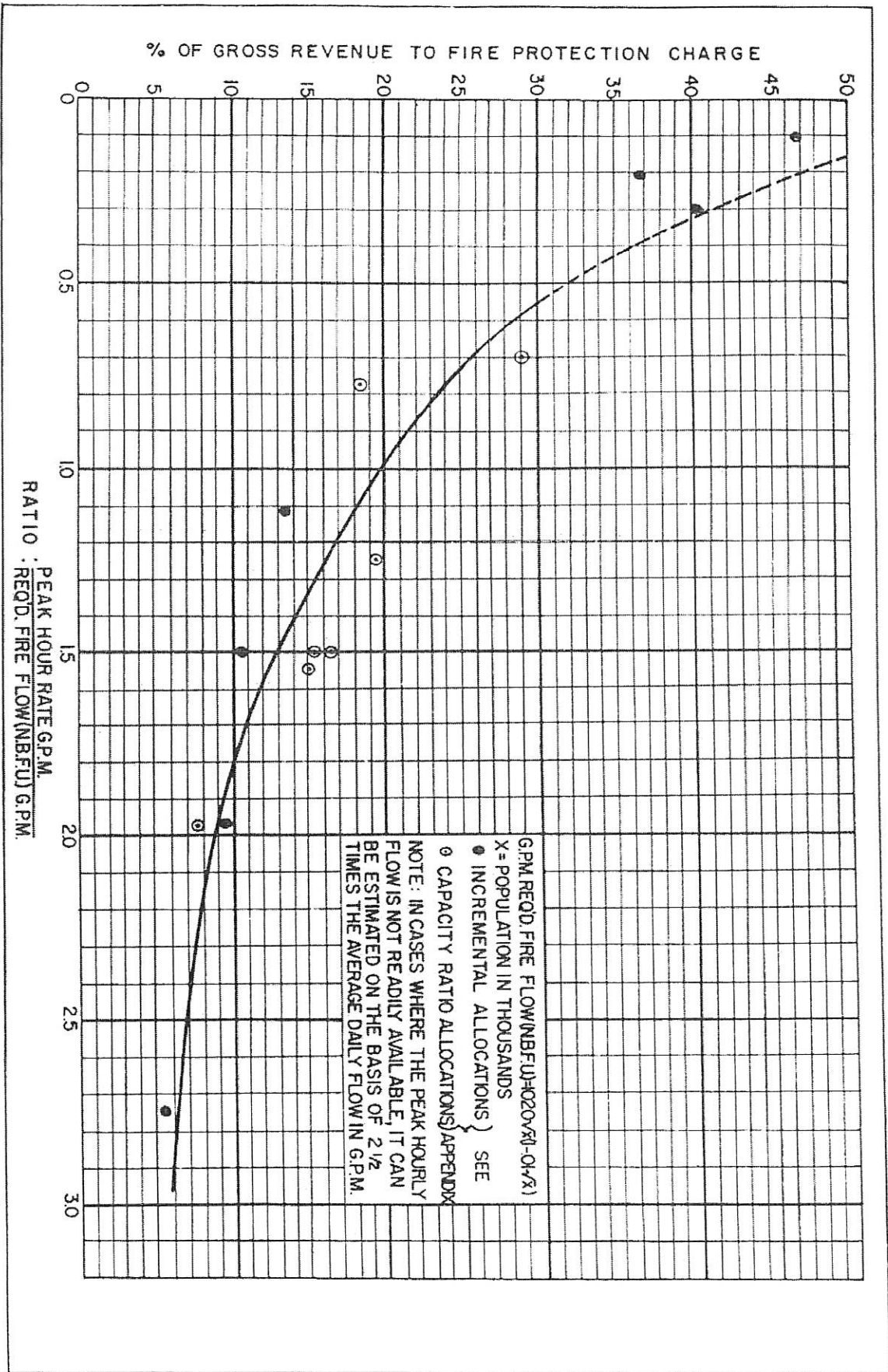


FIG. 1 DETERMINATION OF PERCENTAGE OF GROSS REVENUE FOR PUBLIC FIRE PROTECTION CHARGE

Chapter 69 – Curve calculations

- Peak Flow Rate
- Population Served/1000 = X
- Required Fire Flow (RFF) Formula:
$$1020\sqrt{x}(1-.01\sqrt{x}) = \text{RFF}$$
- Peak Flow/RFF Ratio
- Determine % on Curve

Chapter 69 – Curve Calculation

Example

- Peak Flow Rate = 7,640 GPM
- Population Served/1000 = 26,800/1000 = 26.8
- Required Fire Flow (RFF) Formula:
$$1020\sqrt{x(1-.01\sqrt{x})} = \text{RFF}$$
$$1020\sqrt{26.8(1-.01\sqrt{26.8})} = 5006 \text{ GPM}$$
- Peak Flow/RFF Ratio
$$7640 / 5006 = 1.53$$
- Determine % on Curve
$$10\%$$

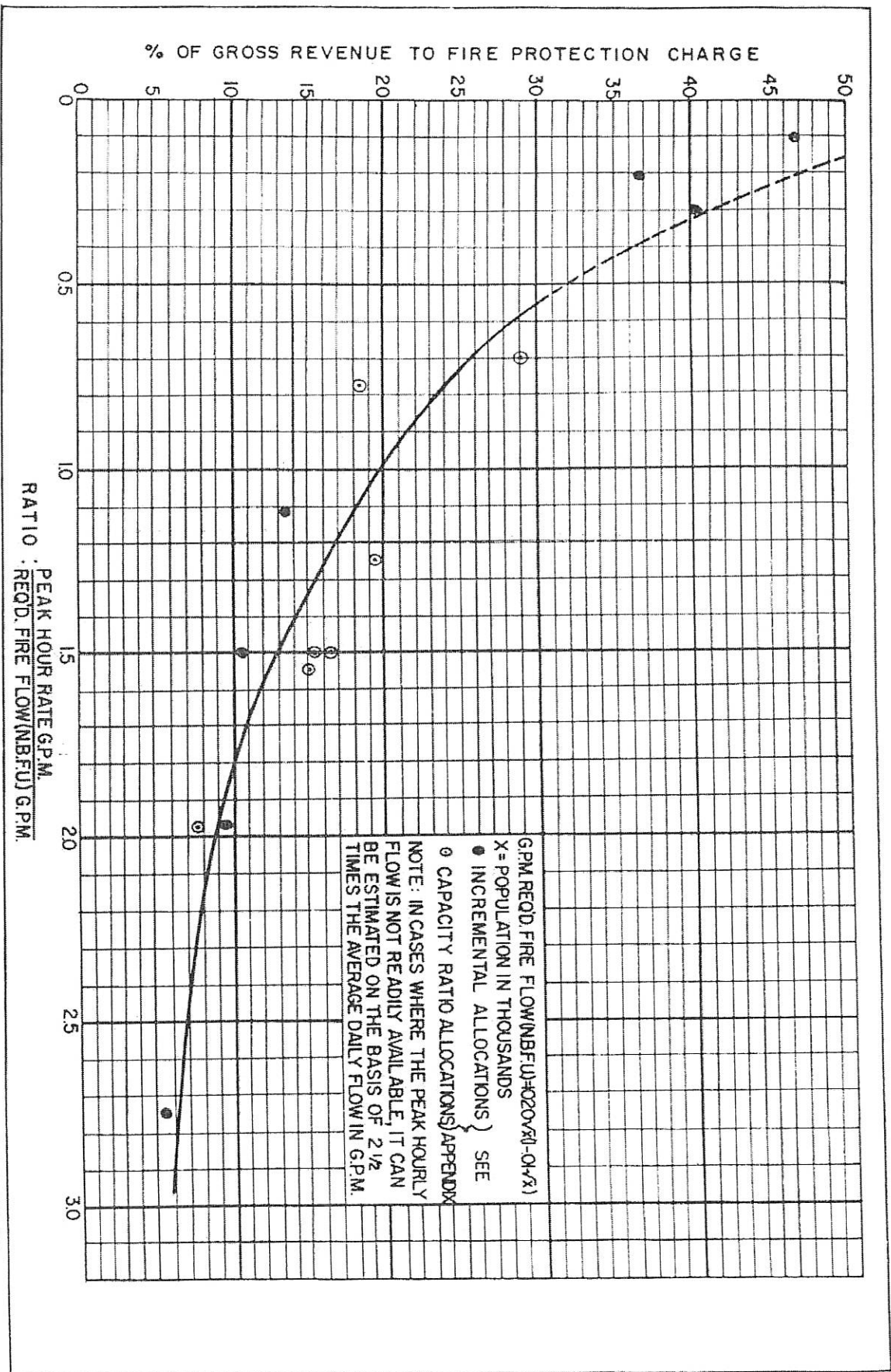


FIG. 1 DETERMINATION OF PERCENTAGE OF GROSS REVENUE FOR PUBLIC FIRE PROTECTION CHARGE

Chapter 69 – Cost of Service

- If it so wishes, a utility can prepare a full allocation study and present to the MPUC for consideration.
 - This method is often used when there is special treatment or large industrial users on the system that should be taken into account.
 - Many times this method determines that the percentage charged should be higher than 30%.
 - May be costly to utility because outside consultants often needed.

Chapter 69 – Cost of Service

- Commission can order a full allocation study.
- Also makes provisions for new hydrants added to the system between rate cases
 - This is not for the replacement of existing hydrants
- Also allows utility to allocate to multiple municipalities when serves those municipalities.

Questions?

- All MPUC Rules can be found on our website at:

<http://www.maine.gov/mpuc/>

- Any questions concerning water utilities can be directed to

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