



ANNUAL REPORT
OF THE
West and South
Water Supply District
of Acton, Massachusetts

*Incorporated by the Acts of Legislature of 1912
Chapter 326, and Accepted by the
District, April 12, 1912*

The Center District Accepted Section 13 of Said Act

FOR THE YEAR
ENDING MARCH 31

1949

MURPHY & SNYDER MAYNARD, MASS

ORGANIZATION — 1948

Clerk

JAMES E. KINSLEY, Term expires 1949

Water Commissioners

WALDO E. WHITCOMB, Chairman	Term expires 1950
BENJAMIN INESON	Term expires 1951
WALTER B. STEVENS	Term expires 1949

Treasurer

CARRIE M. DURKEE Term expires 1949

Auditor

DAVID R. KINSLEY, Term expires 1949

Appointments by the Water Commissioners

Superintendent and Clerk of Commissioners

GEORGE E. CLAPP, Term expires 1949

Collector

RAYMOND A. GALLANT, Term expires 1949

COMMONWEALTH OF MASSACHUSETTS

MIDDLESEX, SS.



To the Clerk of the West and South Water Supply, District of
Acton, GREETINGS:

You are directed to notify and warn the inhabitants of the Town of Acton residing in the Water Supply District as bounded and defined by Chapter 326 of the Acts of 1912, Sections 1 to 13 of said Act, and new extensions accepted by the District qualified to vote in elections and town affairs to assemble in:

West Acton Woman's Club House, Central Street, West Acton,
Tuesday, April 5th, 1949, at Eight o'clock P. M.

Then and there to act on the following articles:

Article 1. To choose a Moderator to preside at said meeting.

Article 2. To elect by ballot a Clerk for one year, a Treasurer for one year, an Auditor for one year and one member of the Board of Water Commissioners to serve for the term of three years; and fix salaries of same.

Article 3. To hear and act on the report of the Water Commissioners, Treasurer, Collector and other officers of the District or any committee appointed at any previous meetings.

Article 4. To see if the District will authorize the Treasurer to borrow money with the approval of the Water Commissioners if necessary in anticipation of revenue of the current year.

Article 5. To see if the Water District will vote to instruct the Water Commissioners to have an annual audit of the various accounts of the Water District or act anything thereon.

Article 6. To see if the Water District will vote to transfer any unexpended balance from Articles 9, 10, and 14 voted at the annual meeting, April 6th, 1948 to the General Fund or act anything thereon.

Article 7. To see if the Water District will vote to require guarantee on all new extensions of four percent on cost for a period of ten years or act anything thereon.

Article 8. To see if the District will vote to raise and appropriate a sum of money for the purpose of extending the water main on Hosmer Street from the end of the six-inch main on Concord Road, along Hosmer Street to Massachusetts Avenue (Route 111), thence easterly along Route 111 to property known as the Manion property or act anything thereon.

Article 9. To see if the Water District will vote to raise and appropriate a sum of money for the purpose of providing and installing a six inch water main, one hydrant, and necessary fittings for a distance of approximately 400 feet in a proposed new street off from Central Street at a point near the residence of C. W. Webber provided A. R. Jenks pays for the excavation and back filling of the ditch and authorize the Treasurer with the approval of the Commissioners, to borrow such sums as may be necessary to meet said appropriation or act anything thereon.

Article 10. To see if the Water District will rescind the vote passed at their meeting April 2, 1946 whereby they voted to raise and appropriate \$2,500.00 to extend the water main from the corner of Elm and Arlington Street to a short distance on Hayward Road and authorize the Treasurer with the approval of the Commissioners to borrow such sums as may be necessary to meet said appropriations.

Article 11. To see if the Water District will vote to accept or approve the ten year agreement made between the Water Commissioners and the Air Reduction Sales Co. of New York or act anything thereon.

And you are directed to serve this warrant by posting copies attested by you in three or more public places in the Water District thereof seven days at least before the time of

said meeting as directed by vote of the Water District. Hereof fail not and make due return of this warrant with your doings thereof to the Water Commissioners on or before the time of holding said meeting.

Given under our hands in Acton this fourteenth day of February in the year one thousand nine hundred and forty-nine.

WALDO E. WHITCOMB,
BENJAMIN J. INESON,

Water Commissioners.

AUDITOR'S REPORT

West Acton, Mass.
March 16, 1949.

Board of Water Commissioners,
West and South Water Supply District of Acton,
Acton, Massachusetts

Gentlemen:

This is to certify that I have completed an examination of the Water District's accounts for the period, March 1, 1948 to February 28, 1949, inclusive.

I believe that they are correct.

Respectfully submitted,

DAVID R. KINSLEY,
Auditor.

REPORT OF WATER COMMISSIONERS

Your Commissioners make the following report covering the various activities of the District for the year 1948:

The following is a record of extensions that have been completed during the year and are now in use:

Article No. 9 Robbins Court—	approximately 465 ft.
Article No. 10 Stow Road—	approximately 1057 ft.
Article No. 14 Prospect Street—	approximately 1917 ft.

Contract awarded to J. J. Ducey Construction Co.

Following is a list of bidders:

J. J. Ducey Construction Company	\$8,709.50
L. P. Boeske	8,930.00
Ernest Barolone & Sons	9,110.00
Susi & DeSantis Co., Inc.	9,600.00
P. DiMascio & Son, Inc.	10,411.50
Anthony D'Alessandro & Co.	10,538.00
Greenough Bros.	10,580.00
Dingley Contracting Co.	12,000.00
John Williams Construction Co.	12,216.00
R. A. Buccella & Sons	12,582.50
Di Mascio Bros.	16,820.00

The extension from the end of the old line at Chadwick Street, South Acton to the Concord Line is under way as an extension of our original contract with J. J. Ducey Construction Company.

We have a contract in process with the Air Reduction Company to supply them with certain quantities of water at a fixed price for a period of ten years. We have a signed agreement in regard to this, but the contract has not been executed at the time of this report. Your Commissioners feel that this contract, when completed, will be of much help in regard to costs of installing, and also financing. We hope at the end of the ten-year period to be in a position to offer this company a lower rate.

Your District has added a total of 32 new services in the past year and five hydrants.

We have had a test well driven at a new location on the station grounds in anticipation of the necessity of more water. The report was very good and we expect to proceed with a gravel-packed well as soon as the need is apparent.

We have also installed a new pressure tank at the Station to conform with Massachusetts State Safety laws.

In regard to further extensions in our District, we feel that as far as our borrowing and ability to pay will warrant, our present obligations of Bonds, notes and interest is all that can be safely carried unless the District wishes to a Real Estate Tax.

Outstanding notes and bonds now amount to \$100,000.00 and we are required to pay each year about \$13,391.50, covering the cost of retiring a fixed amount of bonds or notes each year, plus interest.

Our law suit against Newton Construction Company was tried before a judge auditor and was in our favor. An appeal was entered by Newton Construction Company and at a trial by jury we lost the case. We have appealed the finding of the jury and the actual outcome of the case can not be stated at this time.

WALDO E. WHITCOMB,
BENJAMIN J. INESON,
Water Commissioners.

WATER MEETING

Abstract of the proceedings of the Annual Meeting of the West and South Water Supply District of Acton held in West Acton Woman's Club House.

TUESDAY, APRIL 6, 1948 at Eight O'clock P. M.

Article 1. To Choose a Moderator to preside at said meeting.

Chose David R. Kinsley, Moderator of the meeting.

Article 2. To elect by ballot a Clerk for one year, a Treasurer for one year, an Auditor for one year and one member of the board of Water Commissioners to serve for the term of three years, and fix salaries of same.

Elected: James E. Kinsley, Clerk for one year.

Elected: Carrie M. Durkee, Treasurer for one year.

Elected: David R. Kinsley, Auditor for one year.

Elected: Benjamin Ineson, Water Commissioner for three years.

Voted: To fix the salaries of the district officers at the same rate as last year except the salary of the Moderator. Voted to fix the salary of the Moderator at \$5 per annum.

Article 3. To hear and act on the report of the Water Commissioners, Treasurer, Collector and other officers of the District or any Committee appointed at any previous Meetings.

Voted: To accept the report of the District Officers.

Article 4. To see if the District will authorize the Treasurer to borrow money with the approval of the Water Commissioners, if necessary, in anticipation of revenue of the current year.

Voted: That the District Treasurer with the approval of the Water Commissioners be and is hereby authorized to borrow money from time to time in anticipation of revenue of the Financial year beginning March 1, 1948 and to issue a note or notes therefor payable within one year, any debt or debts incurred under this vote to be paid from the revenue of said financial year.

Article 5. To see if the Water District will vote to instruct the Water Commissioners to have an annual audit of the various accounts of the Water District or act anything thereon.

Voted: To instruct the Board of Water Commissioners to have an annual audit of the various accounts of the Water District under the direction of the Commonwealth of Massachusetts.

Article 6. To see if the Water District will vote to require guarantee on all extensions of Four percent or some other price on cost of construction for a period of ten years or act anything thereon.

Voted: To pass over the article.

Article 7. To see if the District will vote to raise and appropriate a sum of money for the purpose of extending the water main of Newtown Road to the residence of Mrs. John Pederson, a distance of approximately 2400 feet and authorize the Treasurer with the approval of the Water Commissioners to borrow such sums as may be necessary to meet said appropriation or act anything thereon.

Motion: To raise and appropriate the sum of \$13,000 (thirteen thousand dollars) for the purpose of extending the water main on Newtown Road to the residence of Mrs. John Pederson, a distance of approximately 2600 feet and authorize the Treasurer with the approval of the Water Commissioners to borrow such sums as may be necessary to meet said appropriation.

Voted: Total 101. Yes 39; No 61; Blanks 1.

Motion failed to pass.

Article 8. Shall Sections one to twenty-eight inclusive of Chapter Thirty-two of the General Laws, as far as applicable, authorizing any district to establish a contributory retirement system for its employees, be accepted by this District as applicable to all of its employees?

Voted: Unanimously that Sections one to twenty-eight inclusive of Chapter Thirty-two of the General Laws, as far as applicable, authorizing any district to establish a contributory retirement system for its employees, be accepted by this District as applicable to all of its employees.

Article 9. To see if the District will vote to raise and appropriate a sum of money for the purpose of extending water main from Carl Flint's house, No. 33 Robbins Street, 1000 feet north to the property of Albert Braman and authorize the Treasurer with the approval of the Water Commissioners to borrow such sums as may be necessary to meet said appropriation or act anything thereon.

Voted: Unanimously to raise and appropriate the sum of \$2500 (twenty-five hundred dollars) for the purpose of extending water main from Carl Flint's house, No. 33 Robbins Street, 500 feet north to the property of Albert Braman and authorize the Treasurer with the approval of the Water Commissioners to borrow such sums as may be necessary to meet said appropriation.

Article 10. To see if the District will vote to raise and appropriate a sum of money for the purpose of extending the water main from the corner of Stow Street and Robbins Court to a distance of about nine hundred (900) feet on Stow Street and authorize the Treasurer with the approval of the Water Commissioners to borrow such sums as may be necessary to meet said appropriation or act anything thereon.

Voted: Unanimously to raise and appropriate the sum of \$5365 (Five thousand three hundred and sixty-five dollars) for the purpose of extending the water main from the corner of Stow Street and Robbins Court to a distance of 1073 feet on Stow Street and authorize the Treasurer with the approval of the Water Commissioners to borrow such sums as may be necessary to meet said appropriation.

Article 11. To see if the Water District will vote to raise and appropriate a sum of money for the purpose of extending the Water Commissioners to borrow such sums as may be necessary to the house of Mr. John Whittier, a distance of about 9/10 of a mile, and authorize the Treasurer with the approval of the Water Commissioners to borrow such sums as may be necessary to meet said appropriation or act anything thereon.

Voted: To pass over the article.

Article 12. To see if the Water Department will rescind the vote passed at their meeting April 1, 1947, whereby they voted to raise and appropriate six thousand, four hundred dollars (\$6400.00) to extend water mains on High Street from the hydrant near Mrs. Rawitser's house to the southerly side of Conant Street and authorized the Treasurer with the approval of the Commissioners to borrow such sums as may be necessary to meet said appropriation.

Voted: Unanimously that the Water District rescind the vote passed at their meeting April 1, 1947, whereby they voted to raise and appropriate six thousand, four hundred dollars (\$6400.00) to extend water mains on High Street from the hydrant near Mrs. Rawitser's house to the southerly side of Conant Street and authorized the Treasurer with the approval

of the Commissioners to borrow such sums as may be necessary to meet said appropriation.

Article 13. To see if the Water District will rescind the vote passed at their meeting April 1, 1947, whereby they voted to raise and appropriate eight thousand dollars (\$8000.00) to extend the water main from Main Street to the Farm of Timothy Hennessey, Prospect Street, and authorized the Treasurer with the approval of the Commissioner to borrow such sum as may be necessary to meet such appropriation.

Voted: Unanimously that the Water District rescind the vote passed at their meeting April 1, 1947, whereby they voted to raise and appropriate eight thousand dollars (\$8000.00) to extend the water main from Main Street to the Farm of Timothy Hennessey, Prospect Street, and authorized the Treasurer with the approval of the Commissioners to borrow such sum as may be necessary to meet such appropriation.

Article 14. To see if the District will vote to raise and appropriate a sum of money for the purpose of extending the water main from the hydrant on Prospect Street a distance of about 1100 feet to the house of Mr. Hennessey and authorize the Treasurer with the approval of the Commissioners to borrow such sums as may be necessary to meet said appropriation or act anything thereon.

Voted: Unanimously to raise and appropriate the sum of \$9325 (nine thousand, three hundred and twenty-five dollars) for the purpose of extending the water main from the hydrant on Prospect Street a distance of 1865 feet to the house of Mr. Hennessey and authorize the Treasurer with the approval of the Commissioners to borrow such sums as may be necessary to meet said appropriation.

Article 15. To see if the District will vote to raise and appropriate a sum of money for the purpose of extending the water main on School Street from Chadwick Street to the Farm of Angus Christofferson on School Street and from the intersection of Laws Brook Road on Laws Brook Road to the Concord town line, a distance of approximately ten thousand (10,000) feet, and authorize the Treasurer with the approval of the Commissioners to borrow such sums as may be necessary to meet said appropriation or act anything thereon.

Motion: To raise and appropriate the sum of \$52,800 (fifty-two thousand, eight hundred dollars) for the purpose of extending the water main on School Street from Chadwick Street to the Farm of Angus Christofferson on School Street

and from the intersection of Laws Brook Road on Laws Brook Road to the Concord town line, a distance of 10,560 feet, and authorize the Treasurer with the approval of the Commissioners to borrow such sums as may be necessary to meet said appropriation.

Voted: Total 87; Yes 62; No 25.

Motion carried.

Article 16. To see if the Water District will vote to appropriate from funds now in the treasury the sum of two thousand dollars for defense of the action now pending brought by the Newton Construction Company against the District and also for the prosecution of the action against the Newton Construction Company, and the Bonding Company to recover damages for breach of contract.

Voted: Unanimously that the Water District appropriate from funds now in the treasury the sum of two thousand dollars for defense of the action now pending brought by the Newton Construction Company against the District, and also for the prosecution of the action against the Newton Construction Company, and the Bonding Company to recover damages for breach of contract.

Meeting adjourned at 9:45 P. M.

JAMES E. KINSLEY, Clerk.

CLERK'S REPORT

Maintenance Account

Ayer Motor Ex., Express	\$3.48
Acton Pipe Co., Pipe and Fittings	59.34
Acton Excise Tax	2.66
Acton Motor Co., Battery and Repairs	134.65
Acton Welding Co., Welding	13.50
Boston Blue Print Co., Copying	24.40
The Beacon, Advertising Rates	2.80
Boston & Maine R. R., Pipe Privilege ...	10.80
P. H. Burt, Court Copying	531.52
Bronze Fittings Co., Fittings	36.87
Charles Beach, Labor	1.65
Bursaw Gas & Oil Co., Diesel Fuel	96.30
Bursaw Gas & Oil Co., Heating Fuel	297.70
Capitol Motor Ex., Express	2.10
George E. Clapp, Freight, Express and Postage	11.46
Cullinane's Ex., Express	2.79
C. A. Durkee Ins. Agency, Treas. and Collector's Bond and Insurance	321.09
C. M. Durkee, Postage	9.49
A. Dubee, Labor	46.62
Electro Rust Proof Co., Standpipe Ser- vice	114.00
James Fitzgerald, Gasoline	137.25
Edison Electric Co., Pumping Current	2,202.43
Edison Electric Co., Standpipe Current	67.37
Edison Electric Co., Station Current ...	12.16
L. Feltus, Water Rebate	5.26
Fairbanks Morse Co., Safety Valve	7.50
T. Groom Co., Loose Leaf Binder	6.59
R. Gallant, Postage	14.70
Office Equipment Co., Ribbon	1.25
E. P. Gates, Sharpening and Forging...	17.75
G. & J. Tire Co., Recapping	16.00
Ralph Hall, Motor and Air Pump	1,113.13
K. Hampson, Labor	66.66
Laffins Garage, Repairs and Tires	76.13
T. A. Lowden, Workmen's Corp., Balance	49.83
L. Leveroni, Labor	696.40
Maynard & Acton Oil Co., Gasoline	139.89
Maynard & Acton Oil Co., Kerosene ...	30.00
Mass. Treasurer, State Audit	207.30
J. Mancusson, Labor	15.00
Murphy & Snyder, Printing	193.70

Mrs. E. McCarthy, Garage Rent	36.00
J. McGuire, Labor	94.89
N. E. Tel. & Tel. Co., Telephone	83.83
N. E. Meter Repair Co., Parts and Repairs	132.32
N. E. Waterworks Ass'n., Dues	6.00
H. R. Prescott, Valves and Pipe	191.31
Riverside Auto Co., Glass	10.90
Sparling Meter, Repairs	45.00
N. Roche, Labor	495.26
W. Prentiss, Wiring & Labor	19.84
J. Pederson, Gravel	7.43
Town Shop, Supplies	44.52
Textile Products Co., Wipers	17.36
Tackney Ex., Express	1.90
Underwood Corp., Adding Mch. Repairs	17.83
W. E. Whitcomb, Expense Paid Out	33.21
W. A. Woman's Club, Rent	6.00
Raymond Gallant, Collector's Salary	350.00
Walter B. Stevens, Commissioner's Salary	100.00
Waldo E. Whitcomb, Commissioner's Salary	100.00
Benj. J. Ineson, Commissioner's Salary	100.00
Carrie M. Durkee, Treasurer's Salary....	100.00
James E. Kinsley, District Clerk	25.00
David R. Kinsley, Auditor	15.00
David R. Kinsley, Moderator	5.00
George E. Clapp, Superintendent	2,600.00
	<hr/> \$11,438.15

Construction Account

Acton Monumental Co., Compressor	\$50.49
J. Britt, Blasting and Compressor	87.50
Badger Meter Co., Meters	400.97
E. Christofferson, Trucking Pipe	40.00
F. W. Dodge Corp., Adv. Contract	21.20
Director of Accounts, Certifying Notes	2.00
G. Danielson, Labor	49.51
J. C. Ducey Co., Contract Work	10,378.06
Eureka Pipe Co., Service Pipe	474.99
Ferbas Ex., Express	6.52
R. Harris, Labor	246.00
Greenough Const. Co., Balance on Contract	141.93
A. Gravin, Gravel	12.00
Hydraulic Development Co., Hydrotite	340.72
Lee Hydraulic Co., Valve Boxes	285.00

Johns Manville Co., Pipe	3,778.40	
Mountouri Ex., Express	1.24	
Johnson Barker Co., Fittings and Valves	873.64	
Pipe Founders Sales Co., C. I. Pipe	105.96	
Rensaeller Valve Co., Hydrants and Valves	2,525.40	
Red Hed Mfg. Co., Goosenecks	200.35	
Reynards Ex., Express	14.71	
R. Smith, Labor	249.03	
E. Lowd, Labor	794.32	
Horace Tuttle, Writing Release	10.00	
Sumner & Dunbar, Valves, Pipe and Fittings	547.13	
Utilities Supply Co., C. I. Pipe	219.91	
U. S. Pipe Co., C. I. Pipe and Fittings....	20,918.72	
Whitman & Howard, Engineers	1,050.00	
		<u>\$43,825.70</u>

Bonds Paid

First Nat'l Bank of Ayer, Bond	\$2,500.00	
First Nat'l Bank of Ayer, Interest	212.50	
Merchants Nat'l of Boston, Bond	2,000.00	
Merchants Nat'l of Boston, Interest	210.00	
		<u>\$4,922.50</u>
		<u>\$60,186.35</u>

GEORGE E. CLAPP,
Clerk of Commissioners.

REPORT OF COLLECTOR OF WATER RATES

March 1, 1948 to March 1, 1949

Uncollected March 1, 1948	\$73.27
Metered and Unmetered Water	13,954.93
Installing and Repairs	994.04
	<hr/>
	\$15,022.24

Paid Treasurer	\$14,842.10
Abated	37.07
Uncollected March 1, 1949	143.07
	<hr/>
	\$15,022.24

Metered Water for One Year

Center	5,358,041 Gallons
South	17,504,778 Gallons
West	16,951,146 Gallons
	<hr/>
	39,813,965 Gallons

Number of Services March 1, 1949

Center	129
West	339
South	302
	<hr/>
	770

Number of Hydrants 141

RAYMOND A. GALLANT, Collector.

TREASURER'S REPORT

West and South Supply, District of Acton

Cash on hand, March 1, 1948	\$8,806.10
Received from Raymond A. Gallant, Collector	14,842.10
Interest from Savings Bank	50.00
Junk sold	41.46
Hydrant Rentals	3,400.00
Rec. from insurance company, Broken Hydrant	129.00
Middlesex County Nat'l Bank, Tempo- rary Note	17,020.94
Note \$17,190.00 less discount \$169.06	
Middlesex County Nat'l Bank (Bond)..	70,052.21
	<hr/> \$114,341 81
Paid Commission Orders	\$60,186.35
Paid Withholding Tax	55.50
Paid Note	17,139.38
	<hr/> \$77,381.23
	<hr/> \$36,960.58
Withholding Tax Payable	48.20
	<hr/> \$37,008.78

Reconciliation of Cash

Concord National Bank	\$4,379.11
Middlesex County Nat'l Bank	30,129.67
North Middlesex Savings Bank	2,500.00
	<hr/> \$37,008.78
Bonds Out March 1, 1948	\$34,500.00
Bonds Paid	4,500.00
	<hr/> \$30,000.00
Middlesex County Nat'l Bank	69,990 00
	<hr/> \$99,990.00
Bonds Out March 1, 1949Total	

Bonds Due

Ayer First National Bank, Sept. 1, 1956	\$20,000.00
Merchant National Bank, Dec. 1, 1953..	10,000.00
Middlesex County Nat'l Bank, Feb. 1, 1963	69,990.00

CARRIE M. DURKEE,
Treasurer.

The 1948 Assessed Valuation for the Water District
\$3,495,895.00

VALUATION AND WATER RATE STUDY

West and South Water Supply District of Acton,
Massachusetts

October, 1947

Board of Water Commissioners
West and South Water Supply District of
Acton, Mass.

Gentlemen:

As you have requested, we have made a study of the valuation of the water works of the West and South Water Supply District of Acton and also a study relative to its financial structure and water rates, and submit the following:—

VALUATION STUDY

The existing distribution system was largely built in 1912 of tar coated cast iron pipe, with substantial extensions in 1938 and 1946. The system consists of approximately nineteen miles of pipe mains averaging slightly larger than 6 inches in diameter which is normal for small distribution systems. The water supply is obtained from twenty 2½-inch driven pipe wells averaging approximately thirty feet in depth. These wells are grouped together with cast iron suction mains leading to the pumping station where the water is pumped by one diesel driven and one electric driven pump. The pumping plant has the usual vacuum tank, vacuum pumps, flow meter, etc., all housed in a semi-fireproof building with attached office space; also located adjacent to the pumping station is a wooden storage shed. Water storage is provided by a standpipe, of steel riveted construction, 35-feet in diameter and 70-feet in height, with a capacity of 500,000 gallons. The tank has a steel roof and exterior ladder, and a few years ago electric rust-proofing equipment was added to the interior.

With the help of Superintendent George E. Clapp, an inventory of pipe lines and pumping station equipment was taken and an appraisal based on 1947 replacement costs has been made. This appraisal is an estimate of the cost to reproduce now, in all of its parts, the present water system. We estimate this reproduction cost, based on going prices for 1947 to be \$424,200. This estimate includes the cost of land, structures, distribution system, pumping equipment, wells, suction mains, office equipment and miscellaneous expenses. The appraisal of works and property is set forth in the following table:—

APPRAISAL OF WATER WORKS

Description	Replacement Cost 1947 (Column 1.)	Present Value (Column 2.)
Land: including landscaping	\$3,000	\$3,000
Structures: Pumping Station (built in 1912, added to in 1946), Storage Shed, Standpipe and Rustproof equipment	50,700	26,600
Distribution System: Mains, valves, fittings, hydrants, services, meters, etc.	311,200	280,000
Pumping Equipment, heater, fuel tanks, etc.	13,700	6,000
Wells, suction mains and connections	7,000	3,800
Office Equipment	600	300
Engineering and supervision, Legal fees, and miscellaneous expenses	38,000	19,000
TOTALS	\$424,200*	\$338,700*

* These figures do not include the water works truck, tools and stock of water works materials on hand.

About sixty to seventy-five per cent of the cost of constructing most water systems is attributed to the distribution mains. You will note from the foregoing table, Column 1, that the replacement cost of the distribution system alone is about \$311,000. The present value of the distribution system is the replacement cost new, less depreciation and is shown in Column 2 as \$280,000. This represents a depreciation of about 10% over a period of about twenty years which is approximately the average age of the system. The other items which are included in the water works have also been depreciated by varying amounts and percentages according to their ages and expected service life.

Taking into consideration all of the factors which go to make up the declined worth of the structures and appurtenances, such as wear, disintegration and action of the elements, we find the depreciated worth to be \$338,700 as shown in Column 2 above. We believe this amount to be the present fair value of the water works and property of your District.

WATER RATE STUDY

We have made a study of the items and expenses which govern the cost of pumping water for your District over a period of seven years. These figures are shown in the attached Table I. In many cases where pumping is done by diesel engines, without a full-time attendant, some portion of the super-

intendent's salary is charged to pumping cost. Therefore, we have added about one-half of your superintendent's salary in the last column of Table I for the reason that the superintendent carries on this work along with his many other water department duties.

In making the study of water rates we have investigated the cost of operation and the cost of pumping in several communities comparable to your District, and Table II attached, "Comparative Statistics Relating to Several Communities around Acton, Mass., for the year 1945," was developed in order to show how your District compares with them.

Column No. 3 shows that the District's water consumption per service per day was 157 gallons, indicating a normal consumption for such a district.

Column No. 4 lists the valuation of the various communities.

Column No. 5, Cost of Pumping One Million Gallons based on Total Maintenance of Water Department, shows that the District's pumping cost, while more than the average, is not excessive. It must be borne in mind that these pumping costs were based on diesel pumping.

Column No. 6 shows that you have about an average number of services per mile of main.

Columns No. 7 and No. 8 show that your water debt per service and per mile of main is below the average.

Columns No. 10, 11, 12 and 13 show representative figures of the cost of water to the average water taker. Column No. 13 is the most informative as it shows the cost of 50,000 gallons of water per year in each community, the average cost being \$17.06.

We believe, since you are serving water of good quality and the distribution system and standpipe are such that they give adequate pressure thereby giving the community good fire protection, that your rate of \$14 for 50,000 gallons per year is low; it is \$3.06 below the average rate of the twelve communities compared with your District in Table II. We therefore feel it is reasonable to increase your rates to about \$18 per year for 50,000 gallons of water.

We would classify the condition of your water system — average, and not call it an old system since approximately thirty to forty per cent of the distribution mains were installed in the past ten years, and half of the pumping equipment was modernized in the first part of 1947 with the installation of a new centrifugal, electrically driven pump.

We would like to submit the following comparison hoping to impress upon the water takers the value of the services and facilities necessary to make the water available for use: it has often been said that the water itself costs practically nothing — the charges being mostly for services. A ton of coal to heat your house costs approximately \$22 or a ton of fuel oil to heat your house costs approximately \$37 while a ton of water for domestic purposes, at your present rates, costs less than 10 cents!

The results of our investigations as per the above study and report show that the present value of your water works system is \$338,700 and that your water rates are lower than the average for like communities. In our opinion you are in a favorable position to extend your services to other areas and to raise the water rates to help finance the initial cost of such improvements.

Respectfully submitted,

WHITMAN & HOWARD, ENGINEERS
By Edwin M. Howard

TABLE I
Actual Financial Experience of West and South Water Supply District of
Acton, Mass., Water Department

Year	Number of services	Total annual receipts from water at metered rates	Total annual revenue from water including hydrant rental, installation and repair charges	Total annual expenses of water department	Water pumped (in gallons)	Metered water plus cooling water for engines and for fountains (gals.)	% of water accounted for	Av. daily consumption per service based on am't of water pumped**	Average revenue per service based on metered rates	Total est. pumping operation costs including maintenance and heat at station + 50% supt. salary	Cost of pumping per million gals.—including 1/2 of Supt. salary
1940	697	\$9,830.36	\$13,311.23	\$6,295.48	40,558,582	27,517,588	68%	153	\$14.10	\$1,608.77	\$39.80
1941	712	10,536.63	14,212.24	8,373.96	48,017,238	32,130,245	67%	182	15.15	2,109.01	44.00
1942	716	10,216.99	13,539.47	7,471.23	46,499,103	28,688,842	62%	171	14.30	2,130.37	45.80
1943	717	10,634.20	13,884.05	7,582.34	47,304,238	31,828,751	67%	173	14.85	2,486.19	52.50
1944	715	10,737.98	13,974.03	9,302.85	44,613,504	34,361,954	77%	171	15.00	3,489.99	78.40
1945	715	10,825.41	14,382.46	8,771.67	41,276,300	33,538,503	81%	157	15.20	2,168.00	52.50
1946	720	11,519.65	14,990.39	22,895.23*	49,272,400	35,959,677	73%	184	16.00	2,365.00	48.00

* Contains cost of material used in construction of extensions.

**Average daily consumption per service based on amount of water pumped less cooling and fountain water."

THE COMMONWEALTH OF MASSACHUSETTS

Department of Corporations and Taxation

Division of Accounts

State House, Boston 33

To the Board of Water Commissioners
West and South Water Supply District of Acton
Acton, Massachusetts

Gentlemen:

I submit herewith my report of an audit of the books and accounts of the West and South Water Supply District of Acton for the period from November 9, 1947, to November 30, 1948, made in accordance with the provisions of Chapter 44, General Laws. This is in the form of a report made to me by Mr. Herman B. Dine, Assistant Director of Accounts.

Very truly yours,

FRANCIS X. LANG,
Director of Accounts.

FXL:CAH

Mr. Francis X. Lang
Director of Accounts
Department of Corporations and Taxation
State House, Boston

Sir:

In accordance with your instructions, I have made an audit of the books and accounts of the West and South Water Supply District of Acton for the period from November 9, 1947, the date of the previous examination, to November 30, 1948, and submit the following report thereon:

The books and accounts of the district treasurer were examined and checked. The receipts as recorded were analyzed for the period covered by the audit and the payments were checked with the district commissioners' orders authorizing the disbursement of district funds. The cash balance on November 30, 1948 was proved by reconciliation of the bank balances with statements furnished by the banks of deposit and by examination of the savings bank book.

The payments on account of maturing debt and interest were verified by comparison with the amounts falling due and with the cancelled securities and coupons on file.

In connection with the loan authorized in the 1946 district meeting for the extension of water mains at Elm and Arlington Streets in the amount of \$2500., it is again urged that the vote authorizing this loan be rescinded because the payments for this project were made from funds in the district treasury and the purpose for which the loan was authorized no longer exists.

The books of the district collector were examined and checked in detail. The charges for water rates and services outstanding at the time of the previous examination and all subsequent charges as recorded were audited and proved. The payments to the district treasurer were checked to the treasurer's cash book, the outstanding accounts were listed and proved, and the collector's cash on hand on November 30, 1948 was verified by actual count.

Verification notices were mailed to a number of persons whose names appeared on the books as owing money to the district, the replies received thereto indicating that the accounts, as listed, are correct.

The surety bonds of the district treasurer and the collector were examined.

Appended to this report are tables showing a reconciliation of the treasurer's cash and a summary of the water accounts receivable, as well as a balance sheet showing the financial condition of the district as of November 30, 1948.

During the progress of the audit, co-operation was received from all district officials, for which, on behalf of my assistants and for myself, I wish to express appreciation.

Respectfully submitted,

HERMAN B. DINE,
Assistant Director of Accounts.

HBD:CAH

Balance Sheet — November 30, 1948

Assets

\$90,323.26

Temporary Loan in Anticipation of Serial Issue	\$17,190.00
Federal Withholding Taxes	32.60
Unexpended Appropriation Balances:	
Robbins Street Water Mains Ex- tension	\$458.04
Stow Street Water Mains Exten- sion	1,853.43
Prospect Street Water Mains Ex- tension	371.78
Newton Construction Company Litigation Expenses	2,000.00
	<hr/>
	\$4,683.25
Loans Authorized — Unissued	55,800.00
Water Revenue	3,227.70
Surplus Revenue	9,889.71
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	\$90,323.26

Net Funded or Fixed Debt	\$30,000.00
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	\$30,000.00

Water Mains Loan 1938	\$10,000.00
Water Mains Loan 1946	20,000.00
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	\$30,000.00

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Wunderly

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