

New England Water Works Association

Meeting in Vernon, Conn.

April 19, 1973

Inspection of New Treatment Facilities

The Rockville Water & Aqueduct Company

Remarks on Early History of the Company

By

William Heal MacKenzie, President

Members and Guests of the NEWWA

On behalf of the Directors, Officers and Employees of The Rockville Water & Aqueduct Company, we are deeply honored that the NEWWA has given us the opportunity to show its members and distinguished guests our new water treatment plant recently constructed at Lake Shenipsit. We are proud to participate in the on-going reach of the Association whose high purpose for over 90 years since its founding has been as stated in its Constitution "to foster and encourage the exchange of knowledge pertaining to the construction and management of water works" such as ours.

A chronological summary of construction and events dating back almost 150 years and a brief listing of important people whose vision, engineering ability and courage enabled this Company to survive and grow and thereby render a most vital service to the community may be of interest to future historians.

Construction of Dams

1725 - The Payne family built mills near outlet of pond. A dam three feet high was constructed of logs with a guard of wooden slabs filled with gravel on upper side.

1834 - The Payne mill property and all water power therewith connected which included exclusive control of the pond purchased by the Rock Mfg. Co. The Company built a rough stone dam 3-1/2 feet high with a flume. The total cost was \$548.79 of which \$355 was for flowage rights, leaving only \$193.79 for cost of dam.

1847 - Snipsic Aqueduct Company organized on October 18, 1847 with \$7,000 capital stock. First meeting was held at Leed's Co. office November 11, 1847. George Kellogg was elected President, Phineas Talcott, Secretary & Treasurer and Agent to collect subscriptions. Additional Directors were Alonzo Bailey, Allen Hammond and S. P. Hall.

Daniel Hale, former Editor of the Journal of Commerce, and his son-in-law, J. N. Stickney, then owned the paper mill and wanted more water power. He advised raising the dam 17 feet. His idea was termed "visionary" so the new dam was only raised 10 feet. It was built by R. S. Lewis.

The foundation was dug down to ledge, which is nearly perpendicular on the north side, while at a 45° angle on the south side. Total cost was \$14,748.01 of which \$10,816.56 was for flowage rights over 450 acres, so the dam itself cost only \$3,931.45!

The first annual meeting was held at the Rock Co. office on October 16, 1849. It was voted to pay \$122.50 for damages to mills for stopping of water while laying the aqueduct above the stone mill.

1864 - Rockville Water Power Co. was organized on August 23, 1864 with \$20,000 capital. Allen Hammond, J. J. Robinson and L. A. Corbin were chosen committee to raise dam. S. P. Cushing, C.E., reported that 7'8" was as high as old dam could be raised without flowing E. G. Meacham's dam some 3 miles north.

1866 - Rockville Aqueduct Co. was organized under new charter with \$20,000 capital; J. J. Robinson, President, and J. C. Hammond, Jr., Secretary and Treasurer. First meeting was held at Rock Co. office August 28, 1866. Stock subscribed as follows:

Rock Mfg. Co.	- 250 Shares
Hockanum Co.	- 90
American Mills Co.	- 125
Leeds Co.	- 65
Springville	- 22
Clark Hall	- 40
Joseph Selden	- 40
E. K. Rose	- 25
Various others	<u>- 225</u>
Total Shares	882

Deeds were obtained from stockholders of old Aqueduct Co. for all rights and title to pipes and reservoir for \$12,000.

The dam was raised 7 feet higher to 20-1/2 feet with the right to add 8" flashboards. The old dam was removed down to bed rock with blasting. Most of the stone used was quarried just west of dam and swung directly from pit to dam. The pond was enlarged to 550 acres. Total cost of dam was \$35,000. (This quarry pit was filled in 1970 and was used as a base for our new high-service storage tank).

1870 - Due to an extreme drought, by November water level had dropped to 18'7" below the top of the dam; the mills could only run 4-1/2 hours in the morning and 3-1/2 hours in the afternoon.

1871 - A committee was appointed on January 11 to survey the Aborn land for a new reservoir. Committee members J. J. Robinson, Joseph Selden and W. R. Orcutt reported that 300 acres could be flooded 10 -12 feet deep if a new dam were built. The estimated costs would be: land, \$4,700; dam, \$4,500; relocation of highway, \$1,000; gate house, \$800; total, \$11,000. On August 26, 1871 it was voted instead to raise the old 3'8" dam.

1871 - The dam was raised 3 feet more to 24'2" at a cost of \$15,000. The pond now covered 625 acres. A stone wall ranging from 5 to 20 feet high was built on top of ledge on the east side above dam to prevent overflow. The wing-wall was raised again in 1887. (The flow in 1938 topped the wing-wall 1-1/2' and flowed 4-1/4' over top of spillway, requiring sand-bagging of entire wing-wall. The estimated rate of flow over dam was 1,500 second-feet or 1 billion gallons per day.) The dam is 63'6" across, the gate house is 16'3", leaving 47'3" for waste weir.

1893 - The Rockville Water & Aqueduct Company was organized under a charter granted in April, 1893, a merger of the Rockville Water Power Co. and the Rockville Aqueduct Co. The first meeting of corporators was held at the office of the Aqueduct Co. on April 3, 1893. Ten mill-owners subscribed for 5,000 shares as follows:

Rock Mfg. Co.	946	Shares
American Mills	772	"
James J. Regan	724	"
Hockanum Co.	560	"
Rockville Warp Mills	386	"
New England Co.	386	"
White, Corbin & Co.	367	"
Springville Mfg. Co.	347	"
Samuel Fitch & Son. Co.	309	"
Belding Bros. & Co.	<u>203</u>	"
Total	5,000	"

On May 27, 1893, the committee met with the City Council to discuss hiring an engineer. My grandfather, T. H. McKenzie, C.E., of Southington, Conn. (who was also one of the earliest Charter Members of the NEWWA) was one of those proposed; however, a Mr. H. W. Ayres, C.E., of Hartford was finally appointed Engineer on June 3, 1893.

1901 - A small dam 21 feet high was built across Meacham's Brook on the Braun farm in Tolland for \$18,351. The Engineer was W. H. Olmsted, C.E., of East Hartford. Compare these costs with today's costs!

2,186 Cu. Yds. Rubble Masonry @ \$4.00	=	\$ 9,837
110 Cu. Yds. Ashler @ \$12.00	=	1,320
6,050 Cu. Yds. Embankment Dam @ 18¢	=	1,089
108 Acres Clearing @ \$12.00	=	1,296
5,180 Cu. Yds. Embankment Roads @ 17¢	=	1,091
2 Bridges	=	480
231 Acres land (\$10 - \$15/acre)	=	<u>3,238</u>
Total		\$18,351

Pipelines, Gates, Hydrants

1847 - Under a Mr. Ball's supervision, sheet iron pipe lined on the inside and the outside with a thick coating of water cement was laid through all the main street by the old Aqueduct Co. and connected with all the mills. This type of pipe proved very unsatisfactory over the early years because the high pressure burst the pipelines on numerous occasions leading to frequent damage claims.

1866 - On August 29, 1866, the Directors authorized the President and Secretary to sign a contract with the New Jersey Patent Water & Gas Pipe Co. for iron pipe. Wm. R. Orcutt, Superintendent, laid pipeline the whole length of Main St., starting with a 14" iron pipe passing through the dam, then 12" cement pipe down to Rose Silk Mill, 10" cement to Bissell's store. Cement pipe was discontinued at the Rock mills and iron pipe was used due to great pressure, 8" to the Florence mills, 6" to the Hockanum mills and 4" to the Snipsic mills. A total of 5 miles of pipe was laid serving 250 families and 36 hydrants.

A contract for iron pipe was awarded to Wood & Co. of Philadelphia on March 27, 1867. The old cement pipe was in such poor condition that it all had to be replaced starting with Market Street in August, 1868.

1893 - A Committee was chosen on May 27, 1893 to purchase iron pipe, gates and hydrants. On June 14, Mr. Ayres, Company Engineer, recommended the following sizes: 20" from dam to Vernon Avenue, 2,866' @ 140 lbs/ft., 3,837' @ 160 lbs./ft.. 12,750' of 10" @ 60 lbs./ft., and 37,844' of 6" @ 30 lbs/ft. The price f.o.b. Rockville was \$28/ton of 2,240 lbs. Specials from Globe Co. @ 20% from list. J. Drummond of New York, Agt. for pipe contract.

A contract for hydrants and gates was awarded to H. B. Winship, Agt. for Ludlow Valve Co. of Troy, New York. Hydrants, 2 nozzle @ \$23.50; extra hydrant gate, \$34; 2 - 20" gates @ \$117; 1 - 20" @ \$98; 15 - 10" @ \$27.70 and 40 - 6" @ \$12.75. Finally on March 23, 1895, they voted to discontinue the old cement main from the dam to Fountain Park. The valve at the dam was closed Wednesday night, July 3, and opened Monday morning to replace old main with new cast iron. Watering troughs for horses had to be filled from new main during shut down!

1893 - Bids were submitted for laying 5,703' of 20", 12,750' of 10" and 37,844' of 6" as follows:

Moore & Co. of Boston	\$21,842.10
J. W. Buck & Co., Danielsonville	21,211.20
G. H. Eglee, Flushing, N. Y.	19,977.96

Eglee's bid won which included carting pipe from railroad cars and laying with 4-1/2 feet of cover, 20" @ 84¢/ft., 10" @ 36¢/ft., and 6" @ 28¢/ft.

Prices were - setting gates and hydrants @ \$2.00 each, rock work @ \$4.00/cu. yd., masonry @ \$7/cu. yd., extra excavation @ 60¢/cu. yd. Prices were reduced 10¢/ft. to lay if the Water Company paid for carting pipe. The Company was to retain 10% from each monthly bill until the job was completed.

1894 - The following bids were received for 21,000' of 6" and 1,800' of 10" iron pipe for the high service system.

Warren Foundry	\$24.75	Gross	Ton
R. D. Wood	23.10	"	"
Reading	24.64	"	"
J. Drummont	23.10	"	"

C. H. Eglee, contractor, again bid low at 34¢/ft. to lay 10" and 28¢/ft. to lay 6" and would set all gates and hydrants free. In March 1894 he lowered his bid twice at the urging of the Company, 3¢ less for 6" to 25¢/ft. and finally to 19¢/ft. for 6" and 23¢/ft. for 10", but then he wanted \$2.00 each to set 28 gates and 40 hydrants and \$3.00 extra/cu. yd. for rock!

Recent Pipeline Additions

When Suburban Water acquired Rockville in 1957 the total pipe in service equaled 186,658 feet. Total footage as of 12/31/72 was 352,993 feet or almost double in the last 15 years. Even more important is the fact that major extensions (84,000') have consisted of large diameter 12" and 16" cast iron ductile cement lined pipe, especially to South Windsor town line where it is interconnected with the Connecticut Water Company system and the Ellington, Vernon and Tolland Industrial Park areas plus many large apartment complexes. Over 90,000 feet of new 8" cast iron cement lined main has been laid, and 18,000 feet of very old galvanized iron and unlined cast iron pipe 4" and smaller has been abandoned, thereby improving fire flow and water quality as well.

Meters

October 5, 1894 - The Directors requested a sample of 2" Crown meter. They asked National and Union Meter Companies if they would lease meters to try them out. On October 24, 1894 the Secretary had three 2" meters for display. The Company approved Crown, Gem and Union Rotary meters. The mill owners were told to select such sizes and numbers of meters as they felt desirable. Each house was charged \$1.00/year for rent of house meter.

Pumps - High Service System

1893 - On October 27, 1893, Mr. Loving W. Farnum, C.E., of Boston submitted a report for a high service system since many new homes had been built in high areas. He proposed a 15-foot deep, 90-foot diameter reservoir on Fox Hill with a turbine wheel pump at the dam. The estimated cost for a 36" water wheel and casing with duplex pump 10" x 12" and 572,000 gallon masonry reservoir was \$17,050, plus 25,354 feet of pipe.

On November 13, 1893, the Rockville Warp Mills Co. offered to pump a minimum of 78,000 gallons up to a maximum of 200,000 gallons per day if the Water Company would build a new dam for their pond below Snipsic Dam, the cost to be \$800/year for 20 years. On November 30 the main gate at the dam was closed to permit inspection for Penstock.

A cost estimate presented to the Company on December 23, 1893 was \$3,915 for 60" Penstock, \$2,400 for gates plus 15" and 27" wheel, \$1,900 for pump house, \$2,500 for 10" x 12" duplex pump.

1894 - A Worthington Deane and Knowles Duplex Piston Pump to pump 200,000 gallons up 200 feet in 9 hours was bought from the Deane Steam Pump Co. of Holyoke, Massachusetts for \$640.

1894 - The American Mills agreed to pump up water to Charles N. McLean's Reservoir off Pleasant St. for \$350/year for the first 80,000 gallons/day, plus \$80/year for every 20,000 gallons additional per day up to 200,000 gallons. The bid was \$400/year if pumped up to Fox Hill tank site not to exceed 178' above level of dam. A 10-year contract was signed.

1899 - The Company studied feasibility of pumping to high service from outlet at dam. On November 20 a float and gauge was purchased for gate house to measure depth of water.

1903 - In September the Secretary was instructed to interview Harry Adams, Agent of Rockville Warp Mills Co. about placing wheels and pumps at the face of Snipsic Dam in their pond to pump to high service tank, and also to contact Mr. Harris of Rodney Hunt Machine Co. for plans. Mr. White of Rodney Hunt took measurements at the dam, and Mr. Harris submitted bids at a meeting on October 5, 1903.

Deane Pump - 792 GPM @ \$1,610
Knowles Pump - 626 GPM @ 1,930
Gould Pump - 776 GPM @ 1,678

The Water Company purchased 4 separate mortgages held by Peoples Savings Bank of Rockville on Warp Mill property for \$34,000 @ 4-1/2% for rights to place water wheel in their pond and on adjoining land. The mill relinquished the right to raise their dam for \$1,000.

(Note: On Sunday, November 8, 1903, an inlet pipe became clogged with grass, and a diver in submarine armor went down and removed obstruction.)

1904 - A contract was awarded for a Gould pump on February 12. The main gate was closed from May 27 to May 31 to work on the pump. In 1909, it was voted to install "auxiliary power" at the pumping plant. On December 30 a 3-year contract was authorized with the Rockville Gas & Electric Co. for a 35 H.P., 600 RPM G.E. motor for \$465, the minimum charge to be \$25/month. The motor was not to be operated between 4:00 and 8:00 a.m. or 4:00 and 10:00 p.m. any day except for fire or emergency, and then, not until the Electric Co. had given its permission!

Storage Tanks

1894 - The Company bought Martin Flood's land on Fox Hill for a future high service reservoir at a cost of \$1,000. The land measured 430' x 255' with a right-of-way strip to Spruce Street 345' long, 60' to 78' wide. It also bought Charles N. McLean's masonry reservoir off Pleasant Street for \$5,000.

1897 - C. W. Ayres, C.E., examined the Fox Hill site and advised against building a reservoir because of seamy ledge, fearing it would always leak. On September 4, 1897 the Directors voted to erect an iron standpipe on McLean Hill east of reservoir, 30' in diameter and 60' high.

September 30, 1897 - A storage tank contract was awarded to E. Hodge & Co. of East Boston, for \$3,875, delivered and erected on our foundations. Best soft tank steel plates, tensile strength not less than 54,000 lbs. nor more than 62,000 lbs. and elongation of not less than twenty percent. Bottom plates 3/8", first 10' of shell 9/16", next 10' - 1/2", next 10' - 7/16", next 10' - 3/8", next 10' - 5/16", next 10' - 1/4". Bottom connection of shell 4" x 4" x 5/8" angle, inside and outside top angles 4" x 3" x 5/16". Steel ladder outside 10' from bottom, 2" x 1/2" sides, 3/4" rungs, 12" on centers.

All vertical seams were double riveted, all other triple. Two coats of red oxide of iron outside and in, bottom one coat before lowering, 6-month guarantee, payment 50% on delivery, 30% during erection, 20% after completed and tested.

Five bids received:

Best Steam Engine & Boiler Co.	\$5,500
Berlin Iron Bridge Co.	4,560
Tippett & Wood	4,452
Ritter & Conley	4,327
E. Hodge & Co., East Boston	3,875

On May 5, 1903 a- contract for painting the standpipe was awarded to the McAlpin Co. of Springfield for \$60 with a 6-year guarantee.

On November 23, 1922, Caleb M. Saville of Hartford was given a contract equal to 4% of the cost of installing a new standpipe and new auxiliary pump for his engineering services.

On July 25, 1923, bids for a new standpipe opened with Caleb M. Saville in attendance.

Riter-Conley Co.	- \$14,400 - 150 days
Pittsburgh DesMoines Steel Co.	- 11,490 - 135 "
Walsh's Holyoke Steam Boiler Works	- 10,500 - 90 "
Chicago Bridge & Iron Works	- 10,450 - 150 "

Walsh's bid was accepted due to 90-day completion time.

Bids for an auxiliary pump were received as follows:

Gould Mfg. Co.	- 200 GPM @ \$878
Worthing Pump & Machine	- 520 GPM @ 850
Turbine Equip Co. (DeLaval)	- 500 GPM @ 840
Starkweather & Broadhurst (Morris)	- 500 GPM @ 800

On July 25, 1923, the Directors voted to lease the tank site on Fox Hill to the City of Rockville for \$1/year for park purposes, with the understanding that the Company reserved the right to use the land if needed for a tank.

Watershed Pollution

1894 - On April 18, the President was instructed to write A. J. Thompson requesting him to discontinue his application for a license to sell spiritous and intoxicating liquors at Snipsic Lake, and if not steps would be taken to prohibit running of steamers on the lake. The President was authorized to write to the Tolland County Board of Commissioners to protest the granting of a liquor license to protect the supply of pure water.

1898 - It was voted to oppose the erection of cottages on West Island and to remove privies from near edge of pond.

On November 19, 1906, the Company sold a narrow strip of land (6-1/2 acres) to the new Stafford Trolley Company for \$25/acre, but denied their request to erect shanties for the track workers near the lake due to feared pollution. (This right-of-way was repurchased from the Connecticut Company in 1930 for \$5,000!)

On June 24, 1907 the Secretary was instructed to confer with the State Board of Health regarding boating and fishing on Snipsic and the propriety of giving notice that commencing with 1908 both would be prohibited.

On November 18, 1907, the Secretary with Counsel was ordered to visit the Chairman of the State Board of Health regarding pollution of the lake, and also to consult with the New Britain Water Department as to action they took in removing a pleasure resort from their watershed. They were also to consult with the Ansonia Water Company regarding their experience in planting seedling pines and other trees on watershed.

The Directors authorized the President and Secretary to contact the State Forester, who came to Rockville on May 21, 1908 and inspected the "Keeney Land" for setting out pine seedlings.

The State Chemist was also at work under orders of the State Board of Health to examine the lake and its tributaries for sources of pollution.

Finally on March 9, 1909, Mr. A. L. Thompson agreed to sell "Snipsic Grove" in Ellington, "Lower Landing" in Union, and "East Side Landing" in Tolland for \$16,000. On April 26, 1909, the Company placed this legal notice in the Rockville "Leader":

"The Rockville Water & Aqueduct company, acting under advisement of the State Board of Health, have acquired the land and premises known as Snipsic Grove for the sole purpose of protecting from pollution the drinking water supplied to the city.

"The company will continue the work of cleaning up that portion of the watershed necessary for the protection of the water, and notice is hereby given to all persons proposing to erect or occupy buildings within such area, that if the same are found objectionable, proceedings will be instituted for their removal."

On March 18, 1911, the Treasurer was authorized to order 20,000 pine seedlings for planting.

On July 31, 1911, the Tankeroosan Tribe #51, Improved Order of Redmen, was notified that they must comply with the following rules set forth by the State Board of Health if they erected their new building on the lake shore front.

1. No refuse matter of any description shall be deposited in or upon the ground within 50 feet of present high-water mark of Snipsic Lake.
2. No cesspool, privy or other place for the deposit or storage of excrement shall be located within 250 feet of said high-water mark.

On October 30, 1911 it was voted to acquire the old ice-house property located on the west shore of Lake Snipsic from the estate of Frank E. Willis.

On May 7, 1917, the Directors had Special Deputy Sheriffs appointed by Sheriff Fred O. Vinton of Tolland County to protect and guard the dam, one all day and one all night, and that a watchman's clock be purchased for guards. Guard duty ended February 1, 1919, after World War I ended.

On May 6, 1921, the Directors met at the Hartford Club with Dr. W. B. Bean, Health Officer of Rockville and Dr. Balck and Mr. Jackson of the State Board of Health, regarding pollution on Lake Snipsic. Dr. Black recommended chlorine be injected into the water. Superintendent Thompson was instructed to confer with the Wallace & Tiernan Co. regarding the cost to install and operate chlorine equipment and also to take pictures of all places on the watershed that posed a menace to the water supply.

Mr. J. B. Kenney of the Wallace & Tiernan Co. attended a meeting on May 13, 1921, to explain chlorination equipment. The Directors voted to follow the State Board of Health recommendation that "all swimming in the lake be prohibited, that all fishing and skating from the east point on the island to a point in a straight line due east to the shore be prohibited and that signs be posted on the lake shores to that effect."

On July 19, 1922, a contract was authorized with Newland's Sanitary Laboratory to take a bacteriological test of the water weekly, a chemical analysis once a year and one inspection a year of watershed for \$300 per year!

On June 19, 1924, it was voted to get prices on a chlorinator. On July 29, 1926, the Directors voted to join the Connecticut Forestry Association and a Forester was engaged to inspect all tree plantings. Finally on May 23, 1929, a chlorinator was installed!

Just for comparison, consider what chemicals we used in the year 1972 to treat our supply, an average of over one ton per day!

Liquid Alum	186 Tons
Lime	86 "
Chlorine Solution	25 "
Fluosilicic Acid	24 "
Dry Alum Activated	21 "
Chlorine Gas	15 "
Carbon	11 "
Coagulant Aid	4 "
Copper Sulphate	<u>2</u> "
Total	374

Wages and Salaries

On June 14, 1893, the Directors voted the Treasurer a salary of \$400/year and \$2.50/day to Charles W. Wood as Foreman. Auditor's fees were set at \$5.00 at the 1903 annual meeting.

On August 16, 1910, Mr. A. T. Thompson was engaged as Superintendent at \$1,000 per year. On January 1, 1914 the Superintendent's salary was raised to \$1,300/year with \$200 allowed for use of auto. Mr. Robert L. Thompson was hired at \$15.00 per week and Nelson Welspeak was hired as assistant in 1917. On January 1, 1920, the Superintendent's salary was raised to \$1,800 per year.

On April 20, 1923, Robert Thompson's pay was increased to \$5.50 per working day. A. T. Thompson retired on August 20, 1925, completing 15 years as Superintendent and Robert Thompson was appointed new Superintendent. His salary in 1930 was \$2,600 per year and Sam Moorehouse was hired at \$35.00 per week "with no overtime"!

On March 24, 1927, Harry Ott was hired. He is here today and will retire on May 31, 1973 after more than 46 years of loyal service to The Rockville Water & Aqueduct Company. A. T. Thompson's grandson, Royal Thompson, was hired on October 10, 1939, and is now our Company Foreman. He is also here today.

Just as a reminder that a 40-hour work week did not always exist, on and after January 1, 1914, the main gate at the dam was opened at 6:30 A.M. each day to comply with the new 55-hour law for a work week instead of 60 hours.

Water Rates

On April 6, 1864, the water rent for each tenement was increased from \$2.50 every 6 months to \$3.00 semi-annually. It was voted to connect the Aqueduct with Panola mill pond and assess all mills owning stock in the Company who used the water at \$200 annually.

On January 29, 1869, a count was made of all families using water, 250 plus 36 hydrants. Flow ran 13 water wheels ranging from 12 feet to 40 feet in diameter, propelling 82 sets of woolen machines.

On March 23, 1867, a complete set of rules and water rates were established. For one family, \$8.00/year; house occupied by two families, each \$7.00; by three or more, each \$5.00/year. The mills were charged from \$50 to \$300 each for fire protection, water for boilers \$12.00 to \$75.00, dye houses \$60.00 to \$100.00.

In 1868 the Treasurer was authorized to sign a contract for supplying water-motors in the Butler Building to run the Journal presses at a cost of \$150.00 per year.

In June, 1891, the "Report of the Committee on Classification of (Water) Rates" by J. C. Whitney, Chairman and Registrar of Water Works in Newton, Massachusetts, was printed in Vol. VI, No. 1 of the NEWWA. I have a copy of that report in my hand. It was used as a basis for establishing rates in Rockville by the first Board of Directors and is well worth reading even today, 80 years later. This is an excellent example of the far-reaching effect the Association had in those early days in disseminating knowledge about the water works industry just as we hope this paper, and others to be delivered today on construction and operation of our new 2 1/4 million dollar plant will be helpful to other plant operators.

On January 23, 1894, a complete set of new rates was voted:

Single Family ea.	\$5.00/year
2 or 3 Family ea.	4.00/year
4 or more "	3.50/year
Set Bowls "	1.00/year
Water Closets "	3.50/year
Bath Tubs (each Family)	2.00/year
Urinals	2.00/year
Grocery & Drug Stores	6.00/year
Dry Goods & Offices	5.00/year
Restaurants	5.00/year
Meat & Fish Markets	12.00/year
Photo Rooms	12.00/year
Soda Fountains	5.00/year
Barber Shops	5.00/year
Saloons	7.00/year
Beer Pumps	6.00/year
Private Stable (1 horse)	3.00/year
Each Additional Horse	2.00/year
Livery Stables (each horse)	2.50/year
Neat Cattle	1.00/year
Hose (only before 8 a.m. and after 6 p.m.)	3.50/year
Yard Fountains	10.00/year
Boilers (per horse power)	.25/year
Fire Protection (10 Mills ea.)	100.00/year

Metered rates for mills were \$3.00 per 100,000 gallons per year. If over 5 million gallons per year were used, rate was reduced to \$2.25 per 100,000 gallons. The factory hydrant rate was \$10.00 per year. Minimum charge was 10% of cost of meters and setting per year. Metered rates were 10¢ per 1,000 gallons, with all bills due in 10 days or 5% penalty. The service was shut off if bill was not paid in one month, plus a \$2.00 fee to turn service back on. The owner was responsible for all water rents in tenements.

The City of Rockville was charged \$20.00 per year for each hydrant, and the City agreed to pay for all damages to hydrants! Mr. L. H. King was charged \$100 per year for two taps for street sprinkling carts. The mills paid for water on a descending scale down to 50 per 1,000 gallons if use was over 200,000 gallons.

In 1895 house rates were set at 20¢ per 1,000 gallons and a \$10.00 charge was made for all public watering troughs. The Company authorized the purchase of 5 water cranes for supplying watering carts. Sprinklers in the Warp Mills Company factory were allowed at \$50.00 per year.

In October, 1899, metered service was allowed to run the elevator at Sadd Mill and in May, 1904, for the elevator in Prescott block.

On March 18, 1911, a charge of \$3.00 per year was established for the first automobile and \$2.00 per year for each additional machine. On June 26, it was voted to make a house to house canvas of all fixtures used and their condition.

Financial

On June 23, 1894, only one bid was received for the Company's new \$100,000 - 6% Bond issue. The Rockville National Bank bought \$75,000 at \$115.30 per bond or a premium of \$11,475.

On May 11, 1909, the Company negotiated a loan at the Savings Bank of Rockville for \$20,000 and pledged the remaining \$25,000 in Bonds as collateral!

When old bonds matured on May 1, 1923, a new issue of \$125,000 was needed to help pay for new storage tank and pumps. Thompson Fenn & Company's bid of \$980 for bonds was rejected and Roy T. H. Barnes & Company bid of 100 1/4 for new 6%, 30-year bonds was accepted. The new bonds were sold by Roy Barnes & Company at 108 3/4 plus interest.

On Sept. 11, 1931, the Company signed an agreement with Whaples Viering & Company of Hartford to refund \$120,000 of 6% Bonds with new 4 3/4% Bonds.

In conclusion our Utility Plant now amounts to \$5,236,000 vs. only \$542,000 when acquired by Suburban Water Service, Inc. just 16 years ago! We now supply an estimated 13,875 people through 4,021 services with 3,991 meters. We have doubled public fire hydrants from 168 in 1956 to 310 in 1972 plus 67 private hydrants. Water production in 1972 was 1.2 billion gallons.

To finance these major additions and improvements to Utility Plant we have increased our Capital Stock from only \$125,000 in 1956 to \$1,392,000 as of 12/31/72 and have borrowed another \$1,820,000 on long-term notes. Various developers and towns have also advanced or contributed \$1,164,000 for pipeline extensions.

Our operation and maintenance expense has increased \$250,000, more than half of which is for treatment expense including power and pumping. Depreciation on our greatly enlarged investment in plant has increased \$80,000. State and local taxes have soared \$210,000 and interest charges have increased \$135,000. To satisfy the public demand for water of the highest quality, we more than tripled our investment in utility plant and were forced to increase our water rates accordingly. After extensive public hearings the State Public Utilities Commission granted a 156% rate increase on June 19, 1970. Although appealed by the Town to the Superior Court and the State Supreme Court, the Public Utilities Commission decision was finally upheld unanimously in December, 1972. As other water companies and water departments face increasing public pressure for complete treatment facilities such as ours, they too will find it necessary to make major new investments in plant which can only be financed by major increases in rates.

Ken Little
4 Crown St.
Rockville, Conn. 06066
June 26, 1981

In December 23, 1871

Wm. T. Cogswell, Esq. quoted the Rockville Journal, in Mr. Cogswell's book "History of Rockville" from 1823 to 1871:

"In 1847 the mill owners bought the right all around Snipsic Lake and raised the dam at the outlet 10 feet."

"In 1865 a similar purchase was made and the dam raised about eight feet."

"This year, 1871, the dam is being raised three feet more."

I did not learn when the original dam was placed at the outlet.

If my memory is correct, there was a dam north of the present structure.

Squire Cogswell's book mentions many dams placed on the Hockanum River, giving some mention to the fall.