HISTORY OF THE

HOULTON WATER COMPANY

HOULTON, MAINE

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By Donald F. Ellis, Director
June 1989

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INTRODUCTION

EARLY HOULTON

The Town of Houlton was founded in 1807, incorporated as a plantation in 1826 and as a town in 1831. The settlement in 1828 numbered not over 150 people. At this time and for the next fifty years people depended upon springs and wells for water, kerosene lamps and gas-burning lights for illumination and instead of a sewerage system, each home had its own outhouse.

BEGINNINGS OF HOULTON WATER COMPANY

The Houlton Water Company and each of its three operating departments began as privately owned companies between 1880 and 1887. The name Houlton Water Company was appropriate in the beginning because the concern of the citizens in 1880 was to develop a water works following a major fire the summer before. The pumping station was built in 1885, five years after the founding of the Houlton Water Company. At this early stage of utility development water was most important but there was also interest in electricity and the Houlton Electric Company was established in 1902. Generation and distribution of electricity in the country was just beginning. Revenue from electricity was small in those early years. Today, one hundred years later, total revenue in the electric department is ten times the revenue from either water or sewer services.

The sewer department began in 1887, again as a private company with several stockholders and directors being the same persons who later became stockholders and directors of the Houlton Water Company. The Houlton Water Company was established in 1880 as a water works company and when acquired by the Town of Houlton in 1902, was still only a water company. By 1908 the Houlton Water Company had added the sewer and electric departments with one board of directors operating all three departments. The sewer department was not formally merged with Houlton Water Company until 1938.

BOARD OF DIRECTORS

The election of the Board of Directors of Houlton Water Company is provided for by Private and Special Laws of 1937, Chapter 14, which was later amended in 1943. The Board is comprised of six citizens of the Town of Houlton to serve a term of three years with terms staggered so that two directors are elected by vote of town's people every year. The Board of Directors is charged with the responsibility of

conducting the business of Houlton Water Company for the best interests of the Town of Houlton, the sole stockholder. In order to carry out this responsibility the Board employs a general manager to conduct the affairs of the Company. The Board meets regularly each month to review reports on company activities, consider proposals, projects, and financial matters recommended by management.

THE UTILITY SYSTEM TODAY

During the one hundred and eight years since the original capitalization of $20,000 in 1880 to year end 1988 the net worth of Houlton Water Company has increased to $5,029,176 including contributions for plant. There are 43.5 miles of water mains and distribution piping. A new well in Hodgdon put into service during March 1989 together with the Carys Mills wells will supply the town with over 1.5 million gallons each day of pure, underground water. A wastewater plant with an average flow of 1.0 million gallons per day treats the sewerage before discharging clean, chlorinated water into the Meduxnekeag River. Today there are 189 pole miles of electric distribution and 25 circuit miles of sub-transmission electric power lines serving residential, commercial and industrial customers with 76,000,000 kilowatt-hours annually. In 1916 the Houlton Mills and Light Company filed a residential rate of 8.5 cents per kilowatt-hour which is today the same as Houlton Water Company's residential rate.

FINANCING

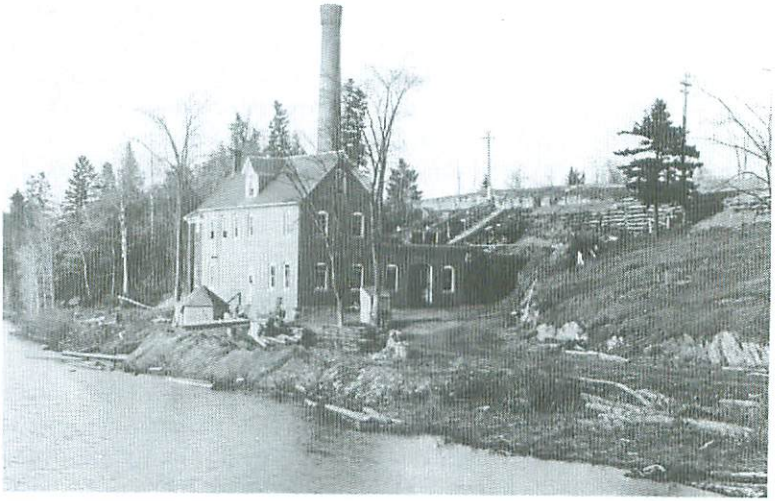
The Company has enjoyed favorable interest rates through municipal bond issues for financing capital costs of plant improvements such as the wastewater treatment plant, electric substations, reservoirs and water wells. In recent years the bond financing has been arranged through H. M. Payson and Company of Portland for intermediate term of ten years. In 1988 a longer term of 20 years was negotiated with Advest, Inc. of Hartford, Connecticut for a bond issue of $3,000,000 at a rate of 7.3% with a provision to renegotiate the terms of the issue in 10 years. In 1988 a loan of $1,200,000 was made through Farmers Home Administration for 30 years at 6.0 percent interest to finance the new Hodgdon well and 4.16 miles of water transmission mains. The Company has always enjoyed arrangements with local banks for short term cash flow funds. At the present time there is a line of credit with Peoples Heritage Bank for $500,000 at 70 percent of the prime rate.

MAINE MUNICIPAL BOND BANK

The Maine Municipal Bond Bank was established to provide long term financing for municipalities at rates more favorable than those of private investment bankers. A provision of the Maine Municipal Bond Bank charter that requires a pledge of all taxable property within the town prevents Houlton Water Company from obtaining funds from this source. Converting the present town ownership into a district would satisfy the Bond Bank but the Company has found it unnecessary as it has been able to obtain long term loans at rates very close to those of the Bond Bank.

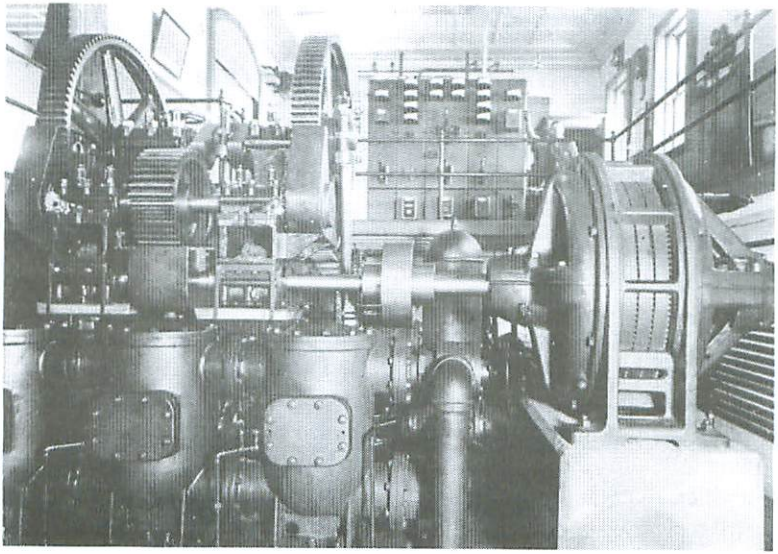
Under the present ownership structure and with a good record of performance the bond issues of Houlton Water Company have always been sought after by individuals with money to invest and the bonds are sold well in advance of the issue date of the bonds. There would be real problems to convert to a district. Among the problems would be the need for three separate operating units of water, electric and sewer under separate boards and managements. The district for electric service would be comprised of the towns of Houlton, Hodgdon, Linneus, Ludlow, New Limerick and Hammond Plantation with representation from each town on the board of directors, making a large, unwieldy board. The Town of Houlton would expect compensation for turning over a substantial share of Houlton Water Company assets to other communities forming the district and it is doubtful if other towns would be willing to raise capital for such a venture.

After much study and consideration the Board of Directors has rejected the conversion to a municipal district and has determined to continue the corporate structure as originally chartered with the Town of Houlton as the sole stockholder.



PUMPING STATION AND ELECTRIC GENERATING PLANT B STREAM
1885

LAYING WATER MAIN ACROSS MEDUXNEKEAG RIVER
AT UNION SQUARE
1885



EARLY WATER PUMP AND MOTOR

BUILDING CONCRETE RESERVOIR
1905

THE HOULTON WATER SYSTEM

BEFORE THE TOWN HAD A WATER SYSTEM

Town annual reports make no mention of a water system prior to 1879, although Cora Putnam's book of 1958, *Story of Houlton*, states, "Near the Snell House on Market Square there was a brick reservoir fed by water from a wooden acquaduct which ran from Spring Street to Military Street then across what is known today as Monument Park and on to the reservoir."

On August 3, 1879 a fire wiped out twenty-one buildings from French's Drug Store along Main Street and Court Street. During the fifty-three years since incorporation of the town there had been no major fire. A hand pump was the only fire fighting equipment. Fire insurance already at a high premium rate, soared to $60 a thousand following the fire. A special Town Meeting was called for September 1, 1879 in which voters authorized purchase of a steam fire engine and agreed to "grant and yield" to a group of citizens the right to provide a supply of water for the Town of Houlton. Businessmen of the Town had become aware of the inadequate fire protection and petitioned the legislature for authority to create a corporation, "for the purpose of furnishing to the people of Houlton a supply of pure water for domestic, mechanical and manufacturing purposes, and to the Town of Houlton, water for the extinguishing of fires and other public uses."

HOULTON WATER COMPANY CHARTERED

The corporation to be known as Houlton Water Company was chartered by the Maine Legislature under Private and Special Laws of 1880, Chapter 227, as a private corporation to supply the inhabitants of the Town of Houlton with pure water. The charter provided for capital stock of $20,000, which could be increased by vote of the Directors to $50,000. Record of meeting June 30, 1885 shows that the capital stock was increased to $50,000. The first annual meeting was held at the "Town House" March 24, 1880. The first directors were: Walter Mansur, President, Black Hawk Putnam, Vice President, Frank Holland, Secretary and Treasurer and Clarence H. Pierce who became President in 1893 and continued as a director for 53 years, 40 of which he served as President.

ENGINEERING AND CONSTRUCTION

Record of meetings shows that on November 10, 1880 the Directors voted to obtain a deed for land from George Drake for $500 with springs and water rights from commonly known Houlton and Cary springs around Garrison Hill. The Directors soon employed Crafts & Forbes, civil and hydraulic engineers of Boston

to make surveys and recommendations. In 1884 meetings were held frequently in an effort to interest capital for construction of water works but no real progress was made. The year 1884 was a difficult time for management as meetings called for stockholders on March 25th, April 22nd, July 22nd and December 22nd were without a quorum. On December 23rd directors met with a quorum present, probably with renewed concern about fire protection as the record says, "in view of recent heavy fire on the 9th inst. and consequent advance and cancellation of insurance". At the time of this meeting $15,150 had been actually paid against $20,000 of stock pledged.

This year-end meeting was an important milestone as plans now went forward so that a pumping station, water mains and a standpipe were built the following two years. A marker built into the brick work of the pumping station at B Stream reads "1885". Records indicate that the building, made of bricks manufactured by Isaac Barker on the North Road, was completed in that year.

A log crib work was built in the middle of the stream above the pumping station site. The crib measured 20 x 15 feet outside with an inner log wall making a central open well 5 by 10 feet. Stones filled the space between the log walls so that foreign matter was screened out of the water flowing to the intake pipe.

The pumping station was a two and one-half story brick building 20 by 50 feet. The lower floors housed the boiler and pumps and the upper floor was living quarters for the operator. The original equipment was two 50 horsepower steam boilers which drove duplex Worthington engines having 14-inch cylinders with a capacity of pumping 350 gallons per minute. Ten-inch cast iron pipe was laid under the Meduxnekeag River to the intersection of Market Square and Court Street. As pipes were extended the diameters of mains were reduced to 8-inch, 6-inch and 4-inch pipes.

The October 14, 1885 record makes reference to completion of a standpipe on High Street which is described by Walter H. Sawyer, Engineer of Boston, as a structure having a foundation of brick 20 feet in diameter, 10 feet high with steel plate standpipe 20 feet in diameter, 50 feet high, holding 117,500 gallons.

EARLY CONSIDERATIONS

Other notations from the records note some interesting bits of early history. January 24, 1885 - Stockholders authorized the Directors to proceed with construction of water works. During 1885 the Directors met weekly negotiating with land owners and considering bid proposals for construction. February 17, 1885 - The

Houlton Water Company made its first contract with the Town to furnish water to 27 hydrants. February 25, 1885 - After considering Pearce Brook and other sites, the Directors voted to locate the water works on the "North Branch of the Meduxnekeag River", location of the present B Stream pumping station. Directors on the same date voted to contract with Ferris & Halladay of Jersey City, for the construction of a water system complete, save dam and cribwork, for a sum of $36,500 and $750 additional in case of a call for extension on Court Street.

TOWN PURCHASES CAPITAL STOCK 1902

Twenty years after establishing the Houlton Water Company in 1880 there was talk about the Town owning the water works. Minutes of the directors' meeting of May 27, 1901 states there was discussion about advisability of the Town purchasing the Houlton Water Company plant or owning a controlling interest in its stock. At the meeting July 8, 1901 the directors voted to have C. H. Pierce and J. A. Browne confer with the Town Committee. The Town had employed Walter H. Sawyer, Engineer of Boston, to appraise the value of Houlton Water Company. In his report he valued the works at $85,235, but further stated, "If I owned the Houlton Water Company works I would not sell to the Town unless forced to do so for less than $100,000 could I be assured that the present rates would be maintained." Another appraisal may be made by adding the $50,000 capital stock to the bonded debt of $30,000 for a total of $80,000. The Sawyer report states that by 1901 there was a water system of 33,019 feet, 6.25 miles of mains.

During ownership by the original stockholders there were six annual dividends declared at 4, 5, and 6 percent between 1890 and 1902. It is interesting to find in a 6-page publication of 1933, *A Brief History of the Houlton Water Company* by C. H. Pierce, President of the Board, this statement, "I only remember of its paying one dividend to the original stockholders." Cora Putnam's book also quotes this statement by Mr. Pierce.

The proposition of the Town owning the water works had become serious so that by March 1902 the Town Warrant read:

> "Art. 24 To see if the Town will vote to purchase the whole or any part of the stock of the Houlton Water Company, and will authorize and empower the Selectmen or a Committee of Citizens duly elected, for and in behalf of the Town, to do any and all needful acts and things, and to make and execute all papers, necessary therefore."

It is interesting to note a write-up in the local newspaper, the Aroostook Times, March 2, 1902 just prior to the town meeting voting to purchase the Water Company. "An important article in the warrant for town meeting is one relating to

the purchase of Houlton Water Company. The Town will probably never have an opportunity of purchasing this plant at such a low and reasonable figure as is offered them at this time. The leading businessmen and ablest financiers of the town are unanimous in the opinion that the Town will make a mistake if they fail to vote favorably. By purchasing the plant the taxes will not be increased as the property will pay for itself. Consider well this important information and vote intelligently regarding it." The Town Annual Report of March 1903 makes an interesting comment: "It was deemed best to purchase stock of the Houlton Water Company rather than its charter rights, property and franchise. By purchasing the greater part of the stock, the Town thus controls the Water Company, and avoids any direct liability for damages or other losses that might occur."

By action of the town meeting in March of 1902 the Town purchased 1,920 shares of Houlton Water Company stock at par, $25.00 per share. This left 80 shares outstanding; 5 shares held by five directors and 75 shares held by two other persons, Adelaide Mansur and John Watson. These seventy-five shares were acquired at the same par value three years after the original purchase. The remaining five shares were held by five directors as stipulated at the time of transfer to the Town and were eliminated in 1939 when turned over to the Town so that by February 1939 the Town owned all 2,000 shares, each share being acquired at the original subscription price of $25.00 per share for total capital of $50,000.

TRIBUTE TO ORIGINAL STOCKHOLDERS

The civic interest of the early directors and stockholders of Houlton Water Company should be recognized. They agreed to turn over their stock in the Company for exactly what they had paid twenty-one years before, although its value had appreciated substantially. The Directors had determined that no stockholder holding out on the transfer to the Town should receive more than the original subscription price of $25.00 per share. Names of the Directors at the time of transfer were C. H. Pierce, H. T. Frisbie, J. A. Browne, Walter P. Mansur and C. P. Tenney.

Purchase of outstanding shares of Houlton Water Company by the Town was duly authorized by the Legislature in the Private and Special Laws of 1901, Chapter 464. On July 1, 1902 the Town acquired control of Houlton Water Company, which at that time did not include either the electric or sewer operation as both were still in private hands.

GENERAL MANAGERS

At the time the Town acquired the Houlton Water Company B. B. McIntyre was employed as manager and continued in this capacity for 31 years when Norman Mullen became manager in 1933. He served until the time of his death in 1953. Paul Coleman came to the company in 1949 as assistant superintendent and became manager in 1953. He served until February 1984 when he retired. John Clark, the present manager, came to the Company August 1984. He is a native of Smyrna and a graduate engineer. His former position was senior project engineer with a Massachusetts electric utility. The strength and stability of the Company has been enhanced by having only four general managers in the 87 years since ownership by the Town in 1902.

GREAT FIRE OF 1902

Between the time the Town voted to acquire Houlton Water Company in March and the actual take-over by the Town in July, Houlton's Great Fire occurred May 17, 1902. The standpipe on High Street had not supplied enough water or water pressure to fight such a big fire. The Directors on July 7, 1903 voted to pay F. W. Pearce $500 for land on Pearce Hill on which to build a reservoir. The new reservoir was completed in 1905 at a cost of $28,107. The Houlton Annual Report of March 1906 tells the story of the new reservoir.

TWO MILLION GALLON RESERVOIR BUILT

"The new reservoir on Pearce Hill has been completed this year and in service since July 23rd, when water was turned on. It is built in a true circle 158 feet 7 inches inside diameter at the top, with an average depth of 13 3/4 feet, capacity 2,097,500 gallons when filled to overflow pipe one foot from top. It is divided by a cross wall 6 feet high so that one side can be cleaned out leaving a supply of about 350,000 gallons on the other side which is nearly three times as much as the old standpipe will hold."

"The concrete wall is built in 30 feet sections to prevent cracking and allow for shrinkage. These sections were built alternately and bonded together by bars of iron and a system of tongues and grooves. The bottom is made of concrete in blocks 4 feet square troweled to a smooth surface, with a V shaped groove between each block. This is done to allow for shrinkage and prevent the blocks from cracking across the centers. It is intended to fill these V shaped grooves with roofing pitch or some other insoluble substance after the concrete is thoroughly seasoned.

The reservoir is located in a ledge which was excavated in 1904 to a depth from surface varying from 4 feet to 11 feet. The concrete walls are on solid ledge which was thoroughly cleaned and washed. Seventy-five carloads of white sand and 2,975 barrels of Alpha & Atlas cement were used in the concrete. This is more material than was at first estimated. It was necessary to buy an extra piece of land in order to obtain sufficient earth grading to cover up the rock fill."

STEEL COVERED RESERVOIR BUILT 1956

The two million gallon concrete reservoir served well for 50 years when in 1956 directors voted to proceed with a new 880,000 gallon steel standpipe at a cost of $90,000 to be installed in conjunction with the old reservoir. Cracks had developed in the concrete which had been repaired and steel reinforcing rods applied in 1937. New regulations require that municipal water reservoirs be covered by 1992. The cost of covering such a large space is so much that a new, additional steel standpipe is now being considered.

GRAVEL PACKED WELLS

Although pure water had been supplied to the town of Houlton for sixty-five years without any disease traceable to the water supply, there were problems with discoloration of water during heavy rainfall run-offs and B Stream presented hazards of pollution from agricultural chemicals. The Directors were concerned about the quality and potential risks of the water supply and in 1939 employed a Massachusetts engineering firm, Metcalf and Eddy, to study water quality and supply. In 1940 Layne-Bowler New England developed a gravel packed well on Burleigh property in the vicinity of town gravel pits south of the County Road. The Burleigh Well provided half of the demand of one million gallons per day and so B Stream was still part of the water supply. The management and directors continued to be concerned about B Stream water and in 1958 employed the Sewall Company to make seismic surveys to find a source of underground water. In 1961, twenty years after developing Burleigh Well, the two Carys Mills wells were developed in conjunction with a contract with a starch manufacturer, Morningstar-Paisley Company. In addition to running a water main to the starch manufacturing plant in Carys Mills, a 12-inch main was extended from the well to the town water system on the Bangor Road in the vicinity of Ivey's Motel. The contract with Morningstar-Paisley provided for a service charge plus a rate charge. The service charge provided revenue that amortized the cost of developing the Carys Mills well. The cost of the entire project was about $241,000.

The Carys Mills project prompted an act by the Legislature through Public and Private Laws of 1967, Chapter 28 to take and convey water in the towns of Houlton and Hodgdon.

The Carys Mills Well plus the Burleigh Well supplied the Town with good quality water without using B Stream for most of the time from 1961 to 1972 when a diesel oil spill in the vicinity of Burleigh Well caused pumping from that well to be discontinued. Although heavy draw-downs of water never proved contamination by diesel oil, studies made by E. C. Jordan, engineering firm in Portland, raised concern about potential contamination from the town dump, which year after year was encroaching on the area of the well. The studies indicated sufficient risk of contamination of the ground water in the well area that management decided to permanently abandon Burleigh Well in November of 1975.

After the Burleigh Well was taken out of service in 1972, it again was necessary to take about half of the water supply from B Stream. By this time regulations required that by the mid-1990's surface water used in municipal water systems must be filtered. The cost of a filtering plant plus the annual maintenance expense is so great that the Company was determined to find another source of underground water.

An engineering firm, Coffin and Richardson of Boston, had been retained in 1966 to investigate potential sources of groundwater. A professional well testing firm explored the entire area from Carys Mills to Littleton with no positive results after drilling sixty-one holes. In 1978 E. C. Jordan, consultants of Portland and Maine Test Boring of Brewer, drilled nineteen test well holes. In 1983 Hydro Resources (formerly Layne-Bowler New England) of Massachusetts drilled 48 test holes at 11 sites in the Houlton area. They recommended that a well be developed at Putnam pit and with a guarantee of 700 gallons per minute (g.p.m.) directors authorized purchase of land and development of a well. Before construction for water mains it was determined that the well failed to deliver a sufficient quantity of water. On January 3, 1985 officials of Hydro Resources met with the Directors and the Manager stating that the well was capable of only 30 to 40 g.p.m. and that the well was "good for nothing" to the Houlton Water Company. A principal of Hydro Resources, Frank Thaeder, came from Ohio and met with the Directors. Management was impressed with his approach to our problems. Hydro Resources agreed to apply the costs of developing the Putnam well to the costs of developing another well which would require additional search for acceptable ground water. Hydro Resources was authorized to continue the search, and to develop a well.

PAUL COLEMAN WELL AT HODGDON

In the summer of 1986, after a 20 year search and expenditures of $136,983.00, an adequate source of good quality water was found in the Town of Hodgdon. A pumping station building has been constructed, a 12 inch main has been laid to connect with the main at Carys Mills, and an additional 12 inch main has been installed from Ivey's Motel to a connection on Court Street. The start-up of the new pumping facility occurred March 16, 1989 and performed as designed at 700 G.P.M. The Hodgdon Well will insure Houlton a supply of ground water at a cost of $1,200,000 for the foreseeable future.

FLUORIDATION

In 1954 the Town Meeting voted to have fluoride added to the water. Dentists had recommended fluoride treatment and the state authorities had approved the health and safety of controlled fluoride in municipal water systems. However, there was opposition to putting chemicals in the water by some citizens and so management insisted on a written ballot to clearly establish the will of the citizens on this controversial issue. Result of the ballot in 1955 on the fluoride question was 3 to 1 against fluoridation. Dentists continued to advise fluoridation treatment and the evidence of benefit to dental care was so favorable in the communities where it was being used, the vote was later turned around and fluoridation was accomplished in 1968.

HOULTON'S PRESENT WATER SYSTEM

The present water system, including the Carys Mills Well, the new Hodgdon Well and the B Stream facility, consists of 36 miles of distribution piping, 7.5 miles of transmission mains, 5 pumping stations and 3 reservoirs with capacity of 3.38 million gallons daily (MGD). The system serves approxiamtely 1,800 customers with a consumption of 500,000 gallons per day. Over the past ten years water loss has been excessive (above 40%) and the Company is presently improving metering, exploring for leaks and making improvements to reduce losses. On a sustained basis the B Stream facility is capable of pumping 1.0 MGD, Carys Mills 0.6 MGD and the new Hodgdon Well is anticipated to yield 1.0 MGD.

Looking to the future, the Maine Department of Health Engineering has mandated that the Company either cover the existing concrete reservoir constructed in 1905 or build a new covered reservoir by 1992. In addition, after 1992 the B Stream facility will no longer be permitted, except in emergencies, to provide water from that surface water source unless a costly filtration system is installed. With the Hodgdon Well on line, the Company intends to use B Stream only for back-up in case of emergency.

HOULTON WATER COMPANY 1900's LIGHT FIXTURES

B. McIntyre
A. Cumming
D. Shanks
M. Billings
M. McElwee
M. Burtt

HOULTON WATER COMPANY BUSINESS OFFICE -
MECHANIC STREET

H. White
M. Burtt
B. McIntyre

THE HOULTON ELECTRIC SYSTEM

HOULTON ELECTRIC COMPANY 1902

Records are not clear regarding the beginning of electricity in Houlton. Historical sketches refer to an independent electric company and C. H. Pierce's *Brief History of the Houlton Water Company* states that in 1908 the Houlton Electric Company was purchased. A check at the Aroostook County Registry, Certificates of Corporations, shows that Houlton Electric Company was authorized January 25, 1902 "to make, generate, sell, distribute and supply electricity in the town of Houlton". Capital stock was set at $10,000. Directors were H. T. Frisbie, Charles Tenney, C. H. Pierce and Walter Mansur, some who were also directors of the Houlton Water Company.

ELECTRICITY 1885

Although the Houlton Electric Company was established in 1902 there was some electrical generating and distribution activity as early as 1885, five years after establishing the Houlton Water Company. There seems to be no record of the installation of an electrical power plant at the Pumping Station, but a November 1885 vote indicates that a power plant was built into the new pumping station during the building construction in 1885. Therefore, it seems that Directors of the Company were planning for electricity during the first five years of operation. The first mention of electricity in the minutes of directors' meetings was the record of July 27, 1886 and reads, "Vote to enter into contract for ten years endorsed by sufficient personal guarantees; To furnish power and attendance complete for $2500 per year, payable quarterly: Electric Light Company to furnish (60 arc) dynamos complete including dynamos and to maintain the same during term also provided patrol man for service of required Water Company to furnish carbons and all other attendance." In November of the previous year the Directors had voted to erect "telephone" poles from Market Square to the pumping station. The next reference to electricity is in minutes of June 17, 1887 which reads, "Special meeting in regard to renting power to the Houlton Electric Company, G. W. Ross agent, for experimental run of lights". The Houlton Water Company was making steam power to operate the large water pumps at that time. In an attempt to get more information about electric power in the early days I visited William Cumming, now one of our oldest citizens whose father, Alex Cumming, worked at the Houlton Water Company for many years. Mr. Cumming recalls that there were three arc lights in the downtown area and that his father changed the carbons in these lights daily.

HOULTON WATER COMPANY SELLS STEAM POWER TO HOULTON ELECTRIC COMPANY

A proper statement of the beginning of the electric department might be that in the next two or three years after establishing the Houlton Water Company in 1880 the Directors planned to generate and distribute electricity in the Town of Houlton. The Directors set up a separate company to which they rented steam power in 1887 and in 1902 the Houlton Electric Company was chartered as a company to generate, distribute and supply electricity in the Town of Houlton.

J. FRANK HOLLAND SUPERINTENDENT HOULTON ELECTRIC COMPANY

The first superintendent of the Houlton Electric Company was J. Frank Holland, who was also a director, clerk of the corporation and Secretary-Treasurer. He was also a director of the Houlton Water Company.

An amusing note in the minutes of July 24, 1888 with Directors Pierce, Frisbie, Holland and Mansur present, states, "On question of paying claim of J. A. Browne for glass broken: Voted that Treasurer pay the bill of $9.90 though clearly unjust and unreasonable".

INGRAHAMS ENGINEERS

Although Houlton Electric Company was a separate company, the Directors of Houlton Water Company controlled the operation. In November of 1887 they voted to secure the services of the first engineer George Ingraham, whose sons Lemual and Walter also worked at the pumping station for many years. Horace (Herbie) Ingraham, son of "Lem", has an old record book which has the following notation dated April 2, 1888, "Ran lights until 3:30 A.M. burned one cord of wood". Another notation mentions a sign in the generating room, "No smoking unless the Engineer is Smoking". Glen, son of Walter, tells of another sign on the high pressure steam boiler, "Trust in God But Have Two Gauges on Your Boiler".

HOULTON MILLS AND LIGHT COMPANY

Houlton Town Reports, 1890 through 1903 show that the Town paid both Houlton Electric Company and E. Merritt & Sons for electricity. The Town had acquired Houlton Water Company in 1902 but the Houlton Electric Company was

not part of the Company until 1908. E. Merritt & Sons owned and operated Houlton Mills and Light Company which included a feed store and flour mill on the south side of the Meduxnekeag River at Union Square. Power to drive the grinding wheels and the electric dynamos was provided by a dam and water wheel just below the iron bridge.

In 1903 the record shows payment by the Town of $1,360 to Houlton Electric Company for street lights and for the town hall and the engine (fire) house. During 1890, 1891 and 1892 there were also town costs recorded for operating gas lights.

MAINE AND NEW BRUNSWICK ELECTRIC POWER COMPANY

On February 5, 1906 a contract was signed by the Houlton Water Company with the Maine and New Brunswick Electric Power Company to purchase power to be generated at Aroostook Falls near Fort Fairfield, just over the international boundary in New Brunswick. The 140 horsepower Babcock & Wilcox high pressure boiler and generator operated by Houlton Water Company were put on stand-by and later abandoned.

The Maine Legislature in 1905 authorized the Maine and New Brunswick Electric Power Company, later named Maine Public Service Company (M.P.S.Co.), to acquire the Presque Isle, Fort Fairfield and Limestone power companies and to sell electric power to the Houlton Water Company. The legislative document provides for not over 600 kilowatts at a price not exceeding three cents per kilowatt hour for a period not less than twenty years. It is interesting to note that 84 years later Maine Yankee is delivering electricity for 2 1/2 cents per kilowatt hour. In 1911 there were several electric power companies in Aroostook County. The following lists the towns, capacity and rates for electricity's per kilowatt.

Ashland	50 KW	12 to 20 cents per KW hour
Caribou	200 KW	12 1/2 cents per KW hour
Fort Fairfield	300 KW	10 cents per KW hour
Houlton	150 KW	5 to 10 cents per KW hour
Preque Isle	2,500 KW	NA
Van Buren	NA	10 cents per KW hour
Washburn	NA	12 cents per KW hour

The municipal electric companies of Houlton and Van Buren are the only electric companies in the County that Arthur Gould of the Maine and New Brunswick Electric Power Company (M.P.S.Co.) did not take over. It is interesting that the rates per kilowatt hour were higher in 1911 than at the present time. Houlton Water Company's rates were lowest then and today are lower than rates of most other utilities in Maine and New England.

HOULTON AND OTHER TERRITORY AUTHORIZED

The Maine Legislature by Private and Special Laws of 1905, Chapter 31, authorized the Houlton Electric Light and Power Company to "make, generate, sell, distribute and supply electricity, for lighting, heating, manufacturing and mechanical purposes in the Town of Houlton, Maine". Radio, television and maybe other purposes were not thought of in those days. Later, in 1909 the purposes were broadened by not specifiying purposes and the territory was extended to Linneus, Hodgdon, Ludlow, New Limerick and Hammond Plantation.

The territory of distribution was expanded further by Private and Special Laws in 1923, Chapter 44; and 1937, Chapter 14 so that the Houlton Water Company had rights granted by the Legislature to provide electric service to Houlton, Linneus, Hodgdon, New Limerick, Hammond Plantation, Ludlow, Smyrna, Merrill, Dyer Brook, Oakfield, Amity, Orient and Cary Plantation. In August 1945 the Houlton Water Company voted that upon receipt of 110 applications electric lines would be extended to one-half mile south of Orient corner. A month later, September 24, 1945, agreement was made with Farm Home Electric Cooperative (REA) for the Company to abandon its right to serve Orient, Amity and Cary and parts of Linneus and Hodgdon not being served already by Houlton Water Company. Part of the agreement was that Farm Home Electric would not erect poles along the right-of-way being used by Houlton Water Company.

HOULTON WATER COMPANY PURCHASES MERRITT'S ELECTRIC COMPANY 1917

April 19, 1907 the directors voted to issue bonds amounting to $45,000 to provide electricity in the Town of Houlton and to purchase any concerns furnishing electricity in the Town. The Houlton Electric Light and Power Company was still not a part of the Houlton Water Company at this time although a small power plant was located at the pumping station. According to the record the Houlton Water Company acquired all property and rights of the Houlton Electric Light and Power Company January 1, 1908 for the sum of $10,000. In preparation for expansion of the electric generating plant a room 18 x 50 feet was added to the pumping station building.

Copy of a letter signed by Charles D. Merritt shows that on February 1, 1918 the electric plant owned by E. Merritt & Sons was sold to the Houlton Water Company. This transaction followed several months of negotiations.

A letter dated January 15, 1917 from Charles Merritt to Arthur Gould states that Merritt would like to sell and requests that Gould keep his offer to sell confidential as to Houlton. Merritt says he would have previously sold his power plant to Houlton "at a fair price if they had wanted it". He stated that he owned all the water rights and dam with water power to three "nice laffel water wheels".

According to correspondence, Arthur Gould of Maine and New Brunswick Electrical Power Company, the Houlton Water Company would not pay more than $4,500 for Merritt's electrical property and rights. Gould did not appear to want the Merritt property but negotiated with an understanding that Houlton Water Company would take over the Merritt plant if Gould could purchase at a reasonable figure. Merritt's offer in July 1917 was for $10,000 and in September he agreed to accept $6,000. Gould agreed to pay $1,000 for old copper wire and so the Houlton Water Company actually paid $5,000 for the Merritt electrical property and rights. The Company did not acquire the dam and flowage rights until 1941 when purchased from Madigan and Pierce.

FISHWAY BUILT INTO DAM

At the insistance of the Maine Department of Inland Fisheries and Game a fishway was built into the dam in 1963 at a cost of $5,000. The dam deteriorated over the years so that it did not hold back water and became unsightly. The flowage had protected a water main that crossed the river above the bridge. In 1976 the Company removed the dam and lowered the water main below the bed of the river.

HOULTON WATER COMPANY SUPPLIES WATER AND ELECTRICITY TO U.S. AIRPORT 1941

In July of 1941 the Houlton Water Company agreed to supply to the newly established United States Government airport 400,000 gallons of water per day at 35 p.s.i. pressure and 200 KVA of electric energy. The additional energy required by the airport prompted a meeting with Milton S. Blackwell, Vice President and General Manager of Maine Public Service Company. He recommended that a diesel-powered generating unit be installed at Houlton. Additional generating power was not added until 1947 when the directors authorized purchase of a 1,000 KW diesel powered generator at a cost not exceeding $200,000. Maine Public Service agreed to purchase this unit over a ten-year period.

SHORTAGE OF GENERATING CAPACITY 1947-48

During the winter of 1947-48 the lack of power generating capacity, caused in part by low water levels at the Maine Public Service hydro plant at Tinker, resulted in rationing of electricity by cutting service for a few hours each day. A naval vessel in Portland harbor provided some power that was wheeled to our area. Construction of a 7,000 kilowatt diesel plant in Caribou was planned by Maine Public Service. Consulting engineers, Fay, Spofford and Thorndike of Boston were retained to study the feasibility of Houlton Water Company generating power locally. The cost of a 3,000 kilowatt plant was estimated at $597,000 and the cost of operation would increase rates to Houlton customers by 70%.

CAPACITY INCREASED WITHIN HOULTON ELECTRICAL SYSTEM

As the demand for electric power increased over the years the distribution system was improved. The original 300 KVA sub-station was soon doubled in capacity. Through subsequent years additional equipment was increased so that by 1988 the Houlton Water Company system has 9 substations with a total capacity of 27,500 KVA.

Today the Company distributes electricity to all of the Town of Houlton and parts of the surrounding communities of New Limerick, Linneus, Hodgdon and Ludlow, comprising a total area of approximately 150 square miles, with a customer base of approximately 4,850 as of April 1, 1988. The Company does not generate any of its own electricity but rather purchases it for resale.

CONTRACT WITH MAINE PUBLIC SERVICE COMPANY

The Company presently purchases 100% of its electric supply from an investor-owned utility, Maine Public Service Company ("M.P.S.Co."). The Company signed a 10 year wholesale power contract with M.P.S.Co. in December, 1985. The contract provides the Company with a firm supply of electricity until 1995, unless the Company desires to withdraw from the contract, in which case, the Company's obligation may be reduced by 10% per year. After 1995, the contract may be renegotiated.

HOULTON WATER COMPANY ENTITLED TO 3 MEGAWATTS FROM MAINE YANKEE

Under the original organizational terms for development of Maine Yankee, public power systems were entitled to purchase power directly from Maine Yankee. Houlton Water Company participated with an entitlement of 3 megawatts of energy. The Company never took power directly from Maine Yankee because the rate combined with wheeling cost was no advantage. In 1980, the Company entered into a contract with Maine Public Service Company allowing Maine Public Service Company to utilize the Houlton Water Company's 3 megawatts of power, from the Maine Yankee nuclear electric generating facility in Wiscasset, Maine for 2 1/2 cents/kwh. Under the terms of the contract, the Company is required to give five year's notice before it may receive power from Maine Yankee. Such notice was given in 1985, and the Company expects to begin receiving power in 1990. The Maine Yankee power, which is less expensive than power supplied by M.P.S.Co., will amount to 30% of the Company's energy, and is expected to decrease electric rates by as much as 10 percent.

LOAD MANAGEMENT PROGRAM

In order to reduce customer and Company costs further the Company has embarked on a conservation and load management program. The Company provides hot water heater blankets and has trained personnel capable of providing energy audits to residential customers. The Company has recently purchased a hot water heater load management system which can automatically shut off customer hot water heaters during expensive or peak hours of purchasing electricity. This computer controlled program will enable the Company to reduce its power costs. A portion of the savings are expected to be distributed back to the consumers, with the balance of the savings used to pay for the new equipment.

ELECTRIC ENERGY GROWTH

Electric energy (k.w.h.) load growth in the Company's service territory for the next five years is projected to increase approximately 2% annually. During 1988 energy load growth was a positive 5.1%, and the highest single month demand was a negative 0.8%. Total energy sold in 1988 was approximately 76,000,000 k.w.h. and peak demand was 13,980 kilowatts.

THE HOULTON WASTEWATER SYSTEM

HOULTON SEWERAGE COMPANY CHARTERED 1887

Many of the same individuals that started the water works and the electric plant also formed the Houlton Sewerage Company to provide sewer services to the inhabitants of the Town of Houlton. A private company was chartered under Private and Special Laws of 1887, Chapter 145. The first directors were J. Frank Holland, Frederick Powers, Hudson Frisbie and Charles Tenney.

Right at the beginning the Directors called in engineering consultants and made extensive studies of proper pipes and plans for a complete sewerage system.

TOWN PURCHASES HOULTON SEWERAGE COMPANY 1903

On August 7, 1901 a committee proposed to the owners of the Company a price of $17,500 for the Town to pay for stock of the Houlton Sewerage Company although the town did not purchase the Company until two years later. The Town Warrant of March 1902, Article 24, was for purchase of stock of the Houlton Water Company and in the same warrant, Article 26 was for purchase of the stock, plant and franchise of the Houlton Sewerage Company. In September of 1903 the Houlton Water Company, now owned by the Town of Houlton, acquired the stock of the Houlton Sewerage Company as authorized by Private and Special Laws of 1903, Chapter 148. On May 16, 1938 the Houlton Sewerage Company was consolidated with the Houlton Water Company so that now all the holdings of the sewer company became property of Houlton Water Company by authority of Private and Special Laws of 1937, Chapter 14.

MEDUXNEKEAG RIVER CLASSIFIED C REQUIRES SEWERAGE TREATMENT

In 1955 the Water Improvement Commission acting under authority of the Legislature, classified water of the Meduxnekeag River under class C. This classification would require treatment of sewerage. A consulting firm, Whitman and Howard was retained in 1956 to make a preliminary study of a sewerage disposal plant. In 1959 Metcalf & Eddy prepared an engineering study of a treatment plant with an estimated cost of $900,000. At this time it was anticipated that the Federal Government would give a grant of 30% and the State would cover 20% of the cost. A burden of one-half million dollars would increase sewer rates substantially and

so the Directors tried to get the river classified down to D, but the Legislature would not change the C classification set by the Commission. During the years of low water in the Meduxnekeag there were obnoxious odors along the river at times in summer that concerned many citizens. At that time New England Starch and Snider Packing Company were discharging large quantities of potato waste into the river. Although it was the industrial pollution that was most offensive in the downtown area, a wastewater treatment plant became inevitable.

WASTEWATER TREATMENT PLANT BUILT 1972

During 1971 management of the Company decided to proceed with building an intercepter line and a treatment plant designed by Metcalf-Eddy, a Massachusetts engineering firm. Directors voted to accept the bid of $2,800,000 by Pizzagallis and Rathburn, contractors of Presque Isle.

Today the sanitation collection system consists of sewer mains, manholes, pumping stations and service connections that deliver the waste products from residences, businesses, industries and institutions to the pollution control plant. Each customer is responsible for the service line from his property to the collection mains. The system consists of 25 miles of mains and 15 miles of distributor piping serving approximately 1,700 customers.

The Company's pollution control treatment plant was designed to receive the entire wasterwater flow from the sewer collection network servicing the Town. The network is a gravity system, and the collected sewage is discharged from the sewer trunk lines to the treatment plant where, after receiving treatment, it is discharged into the Meduxnekeag River. The treatment plant, which was built in 1972 at a cost of $2,800,000, is a secondary treatment facility utilizing the extended aeration activated sludge process. The plant consists of one main building, four covered holding tanks, two uncovered tanks and associated equipment, and is staffed by three Company operators. The plant provides for removal, treatment and disposal of settleable and floating solids, and for reduction of suspended solids and dissolved organic material. Raw sludge, scum and waste-activated sludge are collected and spread as a liquid on nearby municipally-owned land. The plant currently averages 1.0 million gallons per day ("MGD") of incoming sewage, and is designed to handle an average of 3.0 MGD. The Company does not expect average incoming sewage to exceed 3.0 MGD during the next 20 years. The plant is inspected semiannually by the Maine Department of Environmental Protection ("D.E.P."), and these inspections have consistently approved the plant's operations, maintenance and overall condition.

TWO ENGINEERING DESIGN PROBLEMS – OVERLOAD AND SLUDGE STORAGE

The plant was designed by a nationally recognized engineering firm. Before any construction contracts were issued, all engineering drawings, specifications and contracts were approved by the Federal Environmental Protection Agency ("E.P.A."). Once construction was completed, the E.P.A. conducted a final engineering inspection and financial audit. In designing the plant, however, the engineers overlooked two important considerations: (1) the combined status of the Town's sanitary and storm sewer collection systems; and (2) the cold, wet climate of northern Maine in the winter season.

Prior to 1972, all sanitary sewerage and storm drain water was collected and released into the Meduxnekeag River. When the plant was designed, the volume of the combined system's outflow was not adequately considered. Consequently, during periods when rain is heavy or snow is melting rapidly, such as early spring, the plant has difficulty accommodating the combined flow. Soon after the plant went into operation, it also became apparent that the sludge handling facilities were inadequate during winter months. The original plant design incorporated sand drying beds which froze and made handling and storage of sludge impractical in winter months. Because of these problems, the plant has been unable to meet discharge requirements under federal environmental regulations. Consequently, in September, 1984, the E.P.A. ordered the Company to develop plans to reduce infiltration/inflow and increase winter sludge storage capacity at the plant. The Company submitted the plans and after review by the E.P.A., another E.P.A. order was issued in February, 1986. The second order authorized the Company to begin separating sanitary sewerage and storm drain water to reduce infiltration/inflow and to design and construct a winter sludge storage lagoon. A third E.P.A. order issued in December of 1988 mandated sludge handling facilities be built during the Spring and Summer of 1989.

Infiltration/inflow overloads the plant periodically. The Company has completed smoke and dye testing and video monitoring of the sewer collection network, in a effort to locate areas of concern. The Company has eliminated all sources of infiltration/inflow revealed during the testing.

In addition, the Company has been working to provide increased sludge storage capacity at the plant. Permanent covers have been installed over two existing holding tanks to prevent winter freeze-up and provide added storage. In 1986, the Company obtained a $330,000 FmHA thirty year loan at 5.75% interest rate financing for the engineering and construction of a new sludge storage lagoon. The E.P.A. and D.E.P. have approved the initial conceptual design. Final approval is

expected to be obtained once engineering is completed. The Company expects construction to begin in August of 1989. The E.P.A. has not been satisfied with the Company's progress and proposed to fine the Company $10,000. The proposed fine was negotiated to $1,000, a more reasonable level in view of the fact that the original design of the plant was faulty although approved by proper governmental agencies.

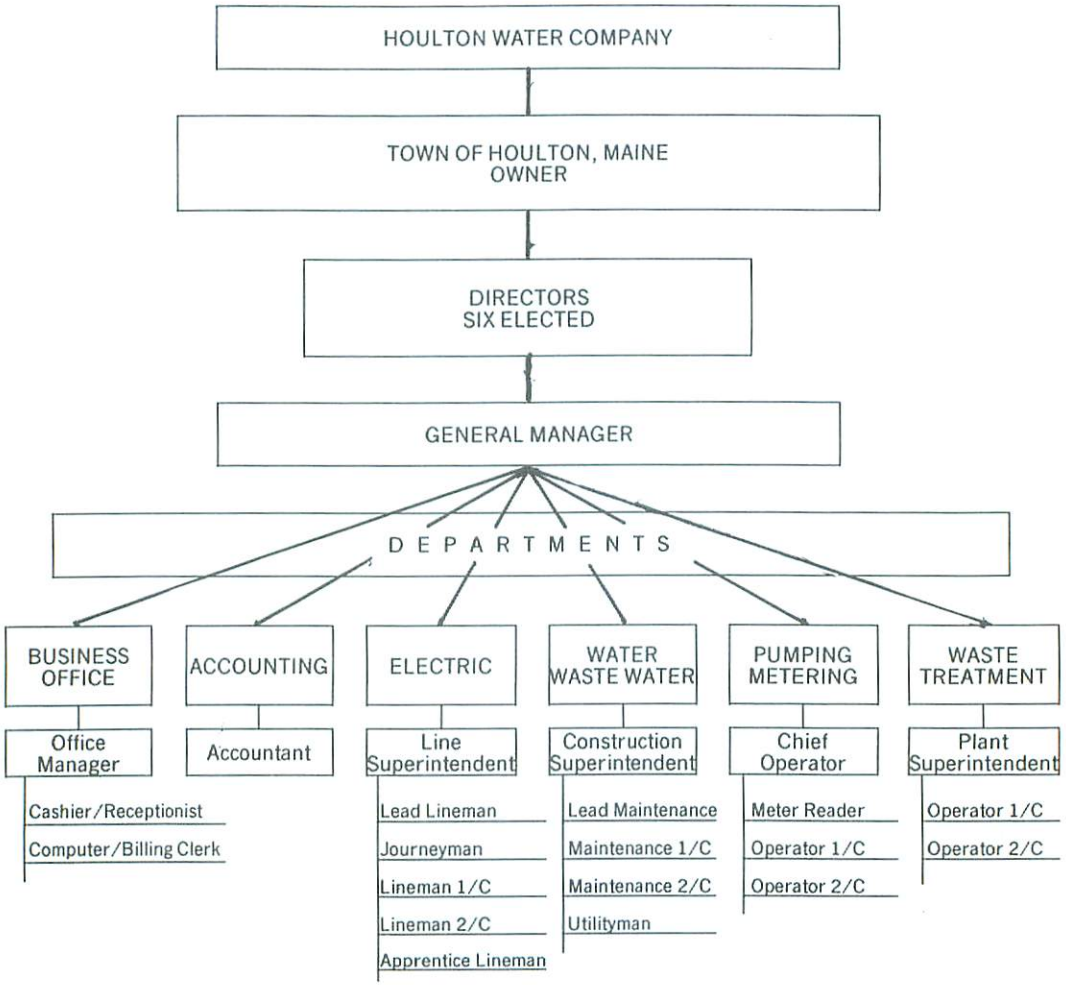
DEDICATION DAY NEW COLEMAN PUMPING STATION
May 6, 1989

REMODELED OFFICE BUILDING
1985

CONCLUDING STATEMENT

The Company today is run by a general manager and 25 full time employees. There are total assets as of December 31, 1988 of $9,729,058.36 with 1988 gross revenue of $7,315,033. The town-owned, three-department utility company is recognized as a great community asset. The rates for electricity, water and sewer have generally been lower than in other towns of Aroostook County and the State. Annual dividends to the Town of Houlton have contributed substantially to the revenue of the Town every year with $960 to $40,000 each year for 86 years for a total of $1,423,831.85 by the end of 1988.

The citizens of Houlton are fortunate for the keen foresight and unselfish civic-mindedness of those early businessmen who made town ownership of its vital utilities possible. That original dedication continues today with the operation of Houlton Water Company by its Directors, management and entire staff.


HOULTON WATER COMPANY
TOWN OF HOULTON, MAINE
OWNER
DIRECTORS
SIX ELECTED
GENERAL MANAGER
D E P A R T M E N T S
BUSINESS OFFICE
ACCOUNTING
ELECTRIC
WATER WASTE WATER
PUMPING METERING
WASTE TREATMENT
Office Manager
Accountant
Line Superintendent
Construction Superintendent
Chief Operator
Plant Superintendent
Cashier/Receptionist
Computer/Billing Clerk
Lead Lineman
Journeyman
Lineman 1/C
Lineman 2/C
Apprentice Lineman
Lead Maintenance
Maintenance 1/C
Maintenance 2/C
Utilityman
Meter Reader
Operator 1/C
Operator 2/C
Operator 1/C
Operator 2/C

DIRECTORS OF HOULTON WATER COMPANY

Walter Mansur	1880 - 1902
Hudson T. Frisbie	1880 - 1902
James F. Holland	1880 - 1893
Black Hawk Putnam	1880 - 1893
Clarence H. Pierce	1880 - 1933
J. A. Browne	1893 - 1931
C. P. Tenney	1893 - 1902
Thomas Putnam	1902 - 1921
Franklin W. Pearce	1902 - 1910
Preston Burleigh	1904 - 1935
Frank Peabody	1910 - 1935
James Archibald	1921 - 1924
Bernard Archibald	1925 - 1935
Fred Putnam	1931 - 1935
James Pierce	1934 - 1935
Thomas P. Packard	1934 - 1942
William L. Blake	1935 - 1941
Albert Chamberlin	1935 - 1939
Louis Dalton	1935 - 1939
Albert Mooers	1935 - 1942
Gordon McKeen	1935 - 1939
Alexander Cumming	1939 - 1947
Lemuel R. Ingraham	1939 - 1943
Lester F. Ellis	1939 - 1945
Robert Williams	1942 - 1961
James Madigan	1942 - 1967
Fred Anderson	1943 - 1947
John Palmer	1944 - 1945
Leland Ludwig	1944 - 1975
Oscar P. Benn	1945 - 1948
Albert Merritt	1946 - 1949
W. J. Strout	1947 - 1953
Alan H. Clark	1948 - 1983
James P. Archibald	1949 - 1952
J. Frederick Donald	1952 - 1984
Asa H. Roach	1953 - 1986
Donald F. Ellis	1961 -
James McPartland	1968 -
Leighton Fortier	1975 -
Galen Hogan	1983 -
Walter J. Peabody	1984 - 1987
Owen Hannigan	1986 -
Gary Severson	1987 -

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Engineering Proposal of 1989 for Water and Waste Water System Review by John Clark, General Manager.