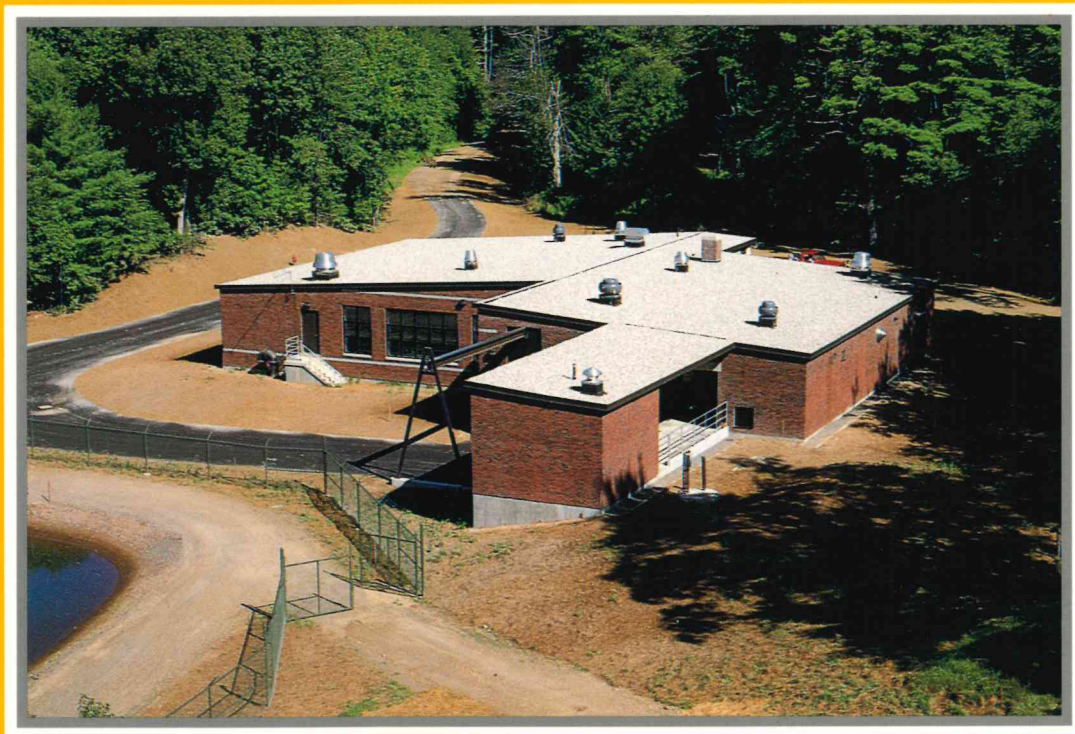


.....

The YORK WATER DISTRICT

.....

ONE HUNDRED YEARS
OF COMMUNITY SERVICE



.....

JOHN D. BARDWELL

.....

The York Water District

ONE HUNDRED YEARS
OF COMMUNITY SERVICE

Dedicated to the memory of

GEORGE A. CHASE

*who was a trustee of the York Water District from 1929 to 1962
and served as its president from 1934 to 1962.*



■ *The outlet of Chase's Pond in 1922.*

The York Water District

ONE HUNDRED YEARS
OF COMMUNITY SERVICE

BY
JOHN D. BARDWELL

Published for the
YORK WATER DISTRICT

BY
PETER E. RANDALL PUBLISHER
PORTSMOUTH, NEW HAMPSHIRE
1996

■ *Chase's Pond, a beautiful lake in the depth of the pines, with a long sinuous course between bold, rocky, and forested banks, forms the objective point for a delightful afternoon drive of two miles.*

From: *York Cliffs: Coast of Maine*, published by the York Cliffs Improvement Society.

■ *Chase's Pond, in the heart of town, away from the settled portion, is almost four and one half miles long and one half mile wide. It is about one hundred and sixty feet above the ocean. The water is remarkably pure and furnishes the water supply for the town.*

From: *Souvenir of Old York*, by C. N. Gough.

■ *One of the favorite excursions was to ride by buckboard—a long wagon with four seats, covered by a hard top fringed with tassels—across Long Sands and on to Cape Neddick, over the Mountain Road and along the Chase's Pond Road, which was then arched cavern-like by branches of sweet-smelling firs, to York Corner and so through the Village.*

From: *New England Miniature*, by George Ernst.

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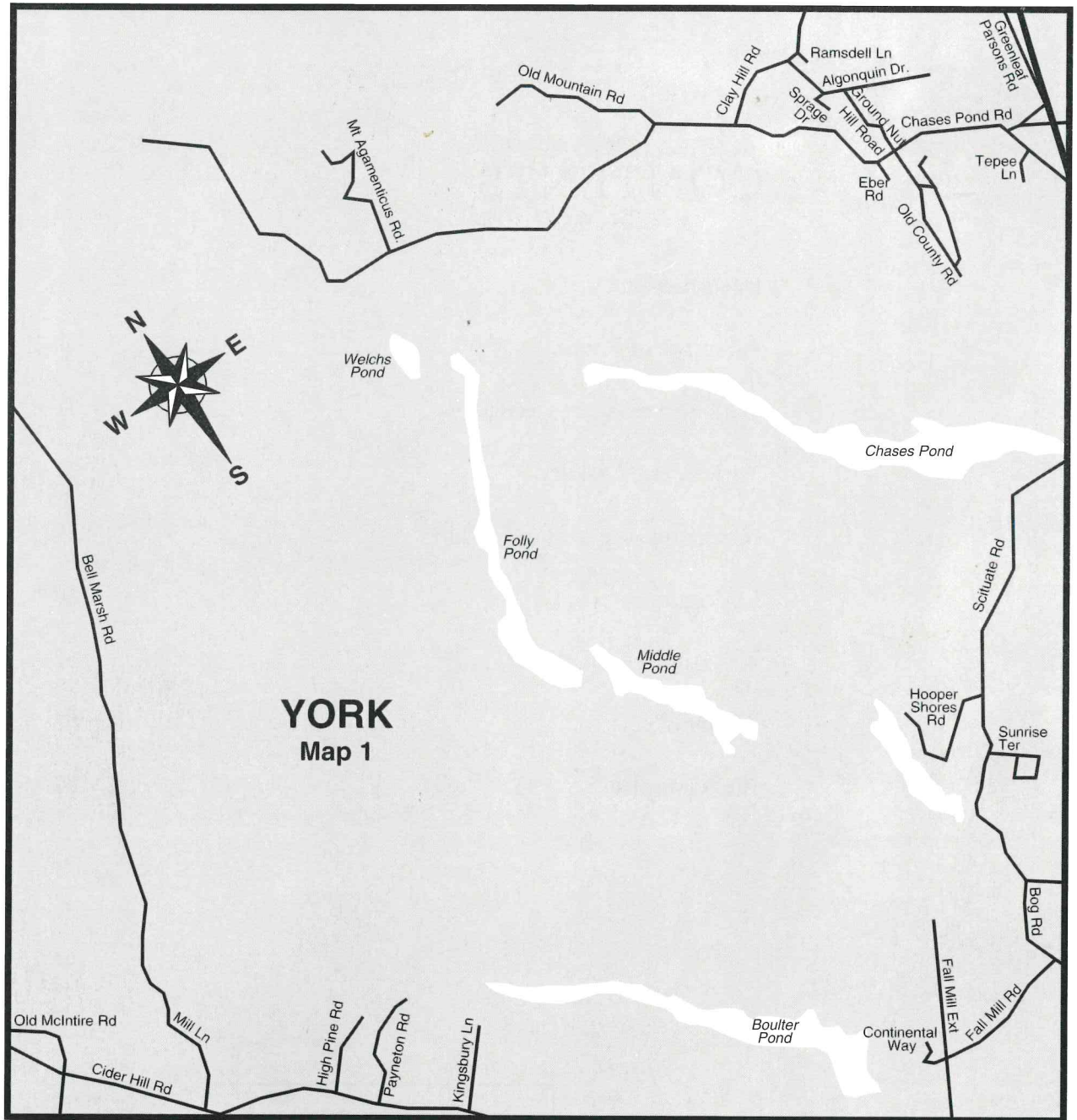
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In Memoriam

John D. Bardwell
1931-1996





■ *Clear, cool water once flowed from Maude Muller Spring on Route 91 in Brixham.*



He drew his bridle in the shade
Of the apple-trees, to greet the maid,

And ask a draught from the spring that flowed
through the meadow across the road.

She stooped where the small spring bubbled up,
And filled for him her small tin cup,

And blushed as she gave it, looking down
At her feet so bare, and her tattered gown.

"Thanks!" said the Judge; "a sweeter draught
From a fairer hand was never quaffed."

From *Maude Muller* by John Greenleaf Whittier

Introduction

ONE OF THE BASIC CONDITIONS FOR LIFE ON EARTH IS that water be available in liquid form. The origin of all life on our planet is believed to be from the sea, and modern man's tissues are still bathed in a saline solution similar to that found in the sea. Every organic process can occur only in the watery medium. The embryo floats in a liquid from conception until birth. Breathing, digestion, glandular activities, heat dissipation, and secretion can be performed only in the presence of watery solutions. Water acts as a lubricant, helps protect certain tissues from external injury, and gives flexibility to the muscles, tendons, cartilage, and bones.

The average person in the Temperate Zone requires approximately 5.5 pints of water per day if he or she is moderately active. About two pints are taken in with a normal diet or created in the body by the oxidation of food. Another three pints are taken in as



■ The monument erected on Route 91 in Brixham to commemorate Whittier's poem "Maude Muller."



■ *Maude Muller spring was a favorite watering spot where many gallons of water were collected for home use. Pollution finally made it necessary to close it for public use.*

fluids. This amount is required to replace the daily losses in perspiration, exhalation, and excretion. A man in good health might be able to survive without water for a few days if he were only slightly active. Unless water became available, his fluid losses would eventually cause dehydration, incapacity, and painful death.

The nutritive value of food crops may be affected by the amount of moisture available when they are in active growth. Because minerals in the soil can be taken in by plants only when the minerals are in solution, the amounts available are greatest when the soil is moist.

Oceans, lakes, and flowing waters provide a major portion of proteins and carbohydrates in the human diet. The gathering of fish, lobsters, crabs and other crustacea, waterfowl, and other creatures that frequent these environments, and the stems, roots, bulbs, or fruits of bulrush, watercress, marsh marigold, wild rice, and other water-loving vegetation have furnished sustenance to people throughout the world.

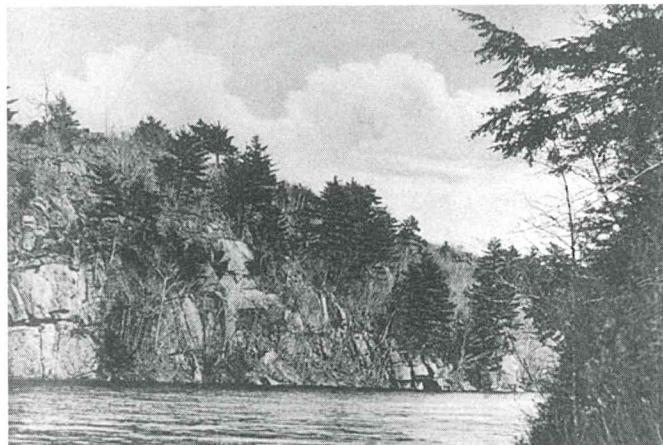
Modern civilization imposes heavy demands on the water supply. Relatively little water is needed merely to sustain life, but additional amounts are needed to prepare our food and wash our clothes and bodies. Today, in the United States, a person uses 60

gallons or more each day for household and lawn-watering purposes. The need for handy and abundant supplies of clean, safe water is greater than ever before in our history. Watershed management takes on added significance by providing an important safeguard to the protection of human health.

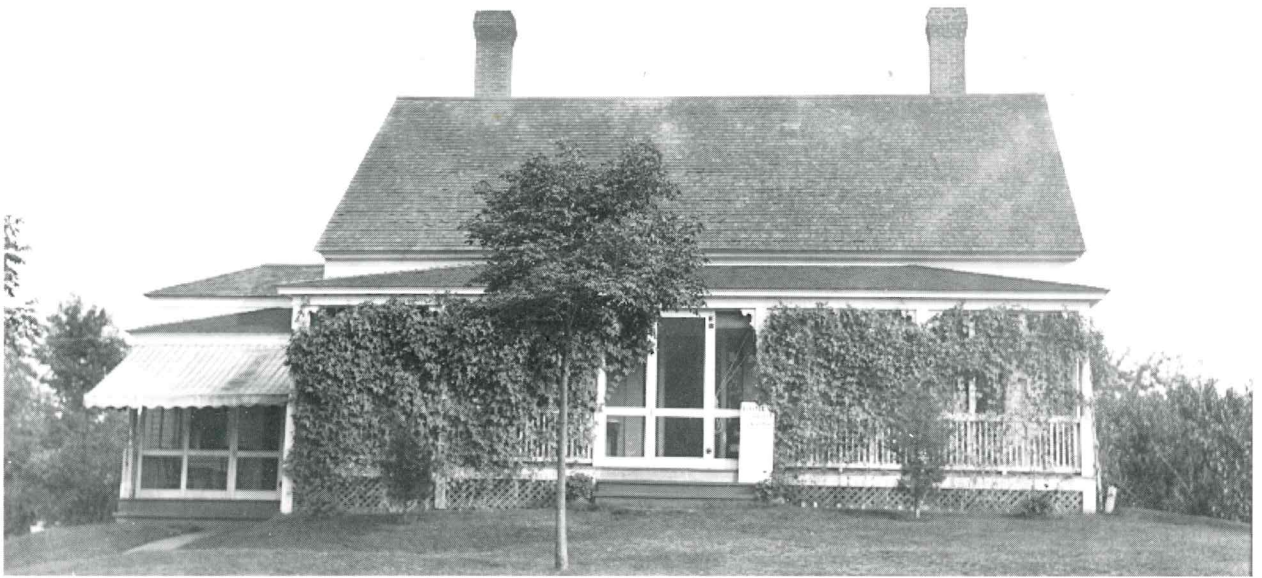
Among early American pioneers, the ownership and control of a clean, abundantly-flowing spring was considered an indispensable prerequisite to locating a home site. Once chosen, the spring was cherished. It meant cleanliness, health, and comfort. It was sheltered against contamination and protected against trespassers. How far we have strayed from the old family spring! Generations of men and women have grown up without experiencing the pleasure of drinking cool, sparkling spring water. Modern living standards have made it necessary for us to rely on water supplies of greater volumes than one family—or even the community—spring could furnish. We now get our water from rivers or reservoirs, and then only after it has been made safe by filtration and chemicals.

This publication is a brief history of the development of a safe and reliable water supply for the residents of the Town of York, Maine. They began by taking their water from springs, brooks, and wells, eventually impounded the waters of Chase's Pond to create a reservoir, and recently built a modern purification system to insure that the surface water from the pond is free of harmful contaminants. The community water supply is York's most precious resource, and the protection of the reservoir and its watershed should be the concern of every citizen.

—JOHN D. BARDWELL



■ A postcard scene on Chase's Pond. The message read, "Where you caught the fish."



■ Charles and Izena Chase sold treats from their porch to the tourists. Augusta "Gusty" Brewster and Charles Brewster, who lived on the other side of the dam, also sold cookies and homemade root beer.



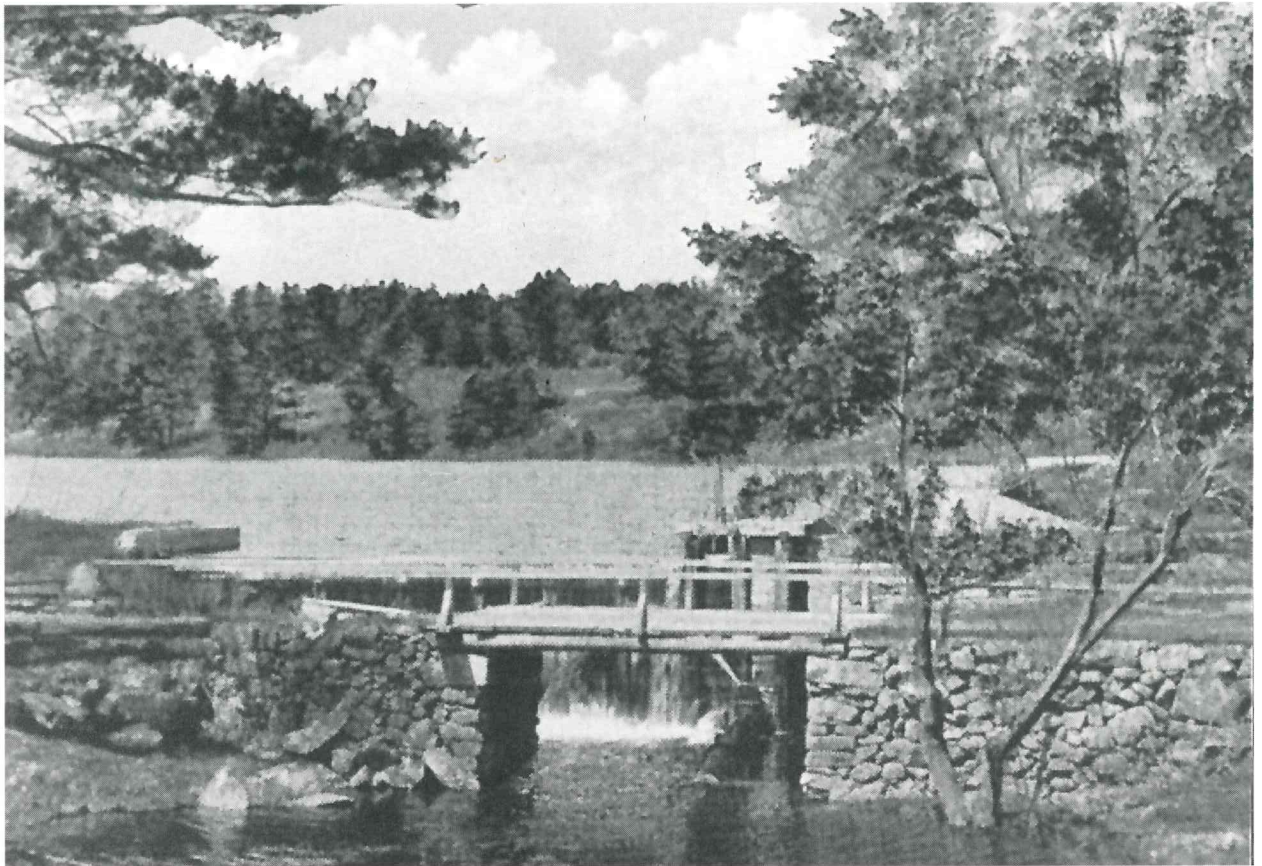
■ Chase's Pond was a beautiful lake in the depths of the pines.



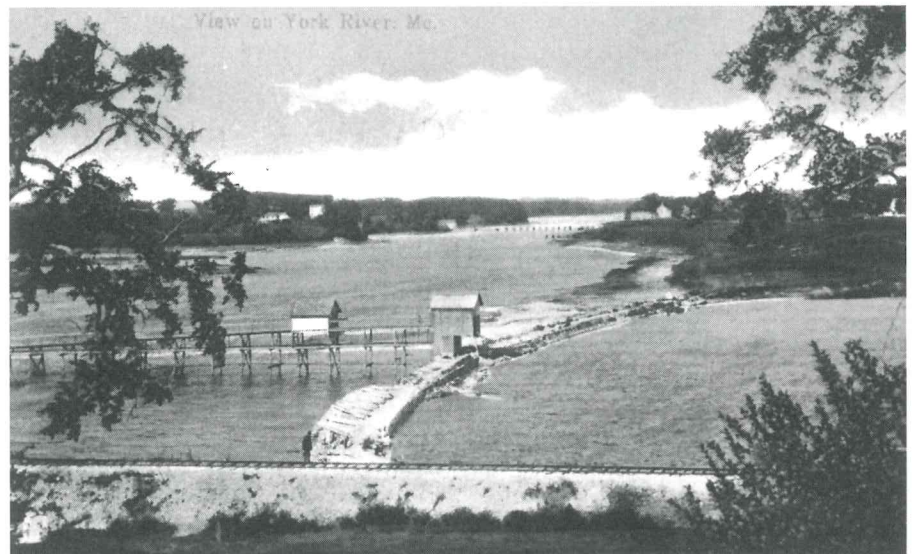
■ The Chases sold cookies, root beer, wild strawberry jam, honey, and watermelon. Charley kept bees and Izena paid the local children five cents per quart for wild strawberries.



■ In the early 1900s one of the favorite excursions for summer tourists was a ride over the Mountain Road and along Chase's Pond Road, "which was arched cavern-like by branches."



■ A timber crib and earth dam, built by Colonel Josiah Chase, raised the water level of the lake ten or twelve feet.



■ Barrell Mill Pond was the site of an attempt to produce ice commercially between 1880 and 1884. Frank Emerson tried to create an ice pond by piping in water from Fall Mill Brook. The wooden pipes, fashioned of staves like a barrel, burst at the joints and he had to abandon the project.

SECTION ONE

A Source of Power

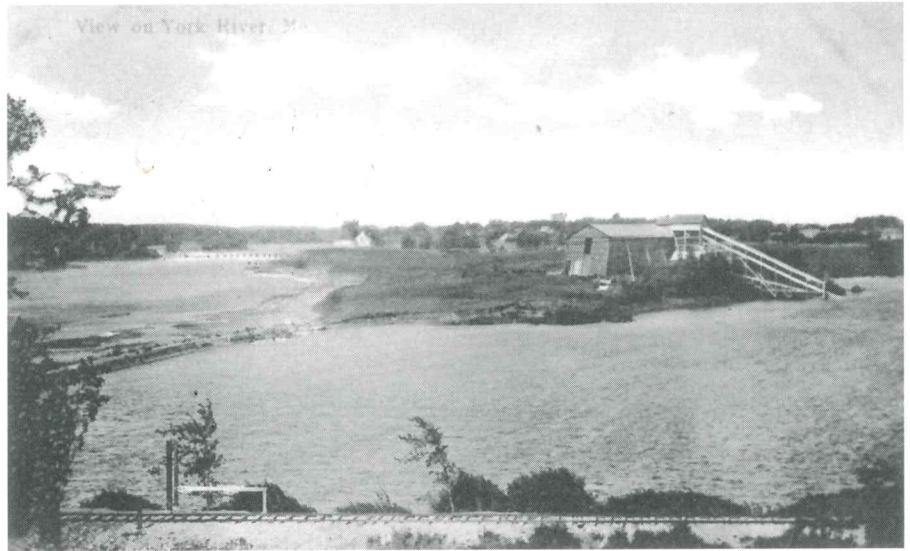
EARLY SETTLERS IN MAINE DEPENDED ON WATER power to operate sawmills, gristmills, and shingle mills as they struggled to build homes in the wilderness. The first mill on the Cape Neddick River was a sawmill, built by Henry Sayward in 1671 and probably located at the opening of Agamenticus Pond. The great pond bore this name first, presumably because it had its rise at the foot of Mount Agamenticus. In 1699 it began to be called Cape Neddick Pond in the town records. It continued to be known by that name until about 1768, when Colonel Josiah Chase acquired the property for mill purposes. It soon came to be called Chase's Pond and has been known by that name ever since.

Lumbering operations along the Cape Neddick River provided employment for the people from the mountain area, and there were at least seven mills in operation along the river at the same time. About 1720 Deacon Arthur Bragdon was probably the first to build a dam at the outlet from the pond. His mill privilege and a fulling mill, where the grease was removed from wool or woolen cloth, were later sold to Colonel Josiah Chase from Spruce Creek in Kittery.

Colonel Chase constructed a dam which raised the water level of the lake about ten or twelve feet. It provided greater power for his new mill, where they finished homespun cloth that had been woven in the homes of area residents. Just downriver from the finishing mill he built a wool carding mill and a sawmill. Wool delivered by the farmers was carded into rolls for spinning into yarn by the local housewives, who did the actual weaving in their homes. Nearly every housewife was a spinster of linen and woolen cloth.

This business was carried on by Colonel Chase, his son Cotton Chase, and his grandson Captain Josiah Chase. Captain Chase added a mill for the manufacture of woolen goods in 1845. The business was turned over to his sons, Charles and John, in 1873, and they continued the operation until it was destroyed by fire. Competition from the larger mills in Massachusetts made it unprofitable to rebuild at that time.

The York Cotton Factory, the first cotton mill in Maine, was incorporated in 1811 by Solomon Brooks, Alexander McIntire,



■ A postcard view of the ice house on Barrell Mill Pond. Emerson sold his rights to water at Fall Mill Brook and Folly Pond to Frank Jones. The ice house stood for many years as a reminder of his failure.

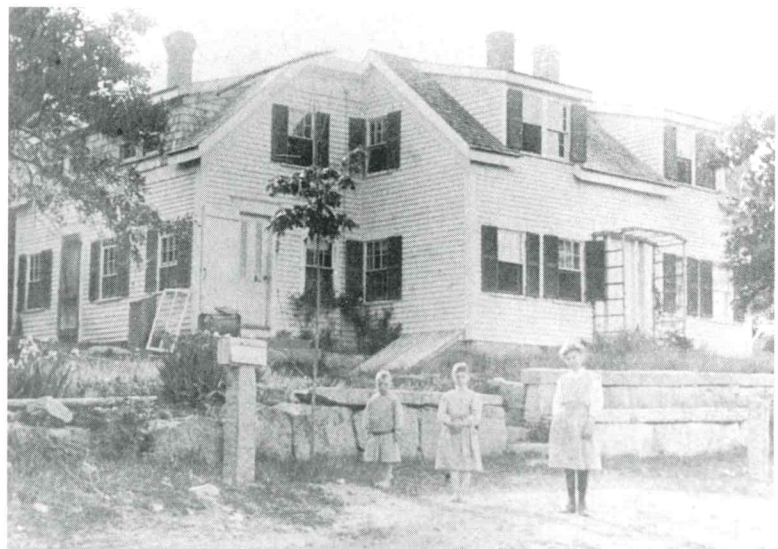
Daniel Carlisle, William Chase, Daniel Brooks, William Frost, and Elihu Bragdon of York. The capital stock was fixed at ten thousand dollars divided into shares of one hundred dollars each. A mill was built about one hundred yards below the outlet of Chase's pond. A boardinghouse was kept by the manager of the mill and most of the operators boarded there. The house later became the residence of Mr. Josiah Chase, founder of the York Shore Water Company. A power loom was imported from England and installed in the mill. The distinction of operating the first loom ever run in New England belongs Miss Elizabeth Carlisle, who was visiting in Dover, New Hampshire at a time when two Englishmen were installing a power loom. She became so interested in the machine that she was hired to operate it. The machine attracted so many curious onlookers that it became necessary to lock the doors and whitewash the window in front of the loom. Later she was hired to operate the new loom at the cotton mill in York where she worked for one dollar per week plus board. The machine that she operated was a crude affair and occasionally the shuttle would leave its track and go flying through the window. The company prospered during the War of 1812. At the close of the war, prices slumped and business decreased. York's pioneering cotton mill became a thing of the past.

The first attempt to create a water distribution system took place between 1880 and 1884, when Frank Emerson attempted to replace the brackish water in the Barrell Mill Pond with fresh water from Fall Mill Brook. Emerson wanted to turn the mill pond into an ice pond near the harbor so he could load ice directly into sailing vessels and ship it to warmer climates. He dammed the pond

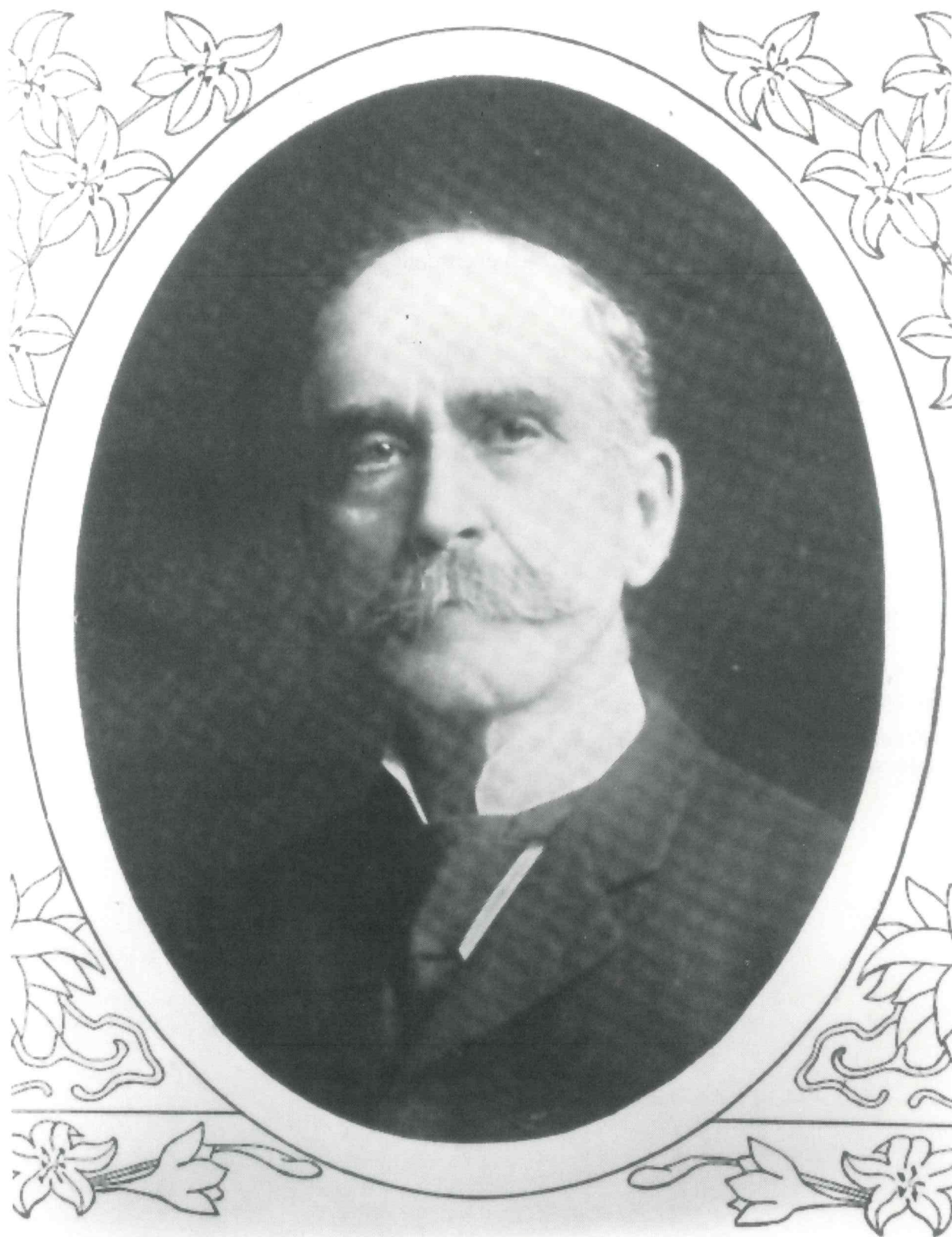
to keep out salt water, built an ice house, and began constructing a pipeline built of wooden staves fifteen or twenty feet long, put together in the same manner that barrels are made. However, the water pressure from the brook was greater than the connecting joints could stand. They burst from the pressure and the project had to be abandoned. The empty icehouse was used by bathers but it never held ice. Emerson's rights to the water of Folly Pond and Fall Mill Brook were acquired by the Agamenticus Water Company, which eventually became the Kittery Water District.



■ Residence of Josiah Chase. It was previously used as a boarding house for the York Cotton Factory.



■ The Card homestead on the discontinued road across from the entrance to the treatment plant. Left to right, Genie, Almira and Mary Card.



■ Josiah Chase, a graduate of Bates College, became the first President and Manager of the York Shore Water Company in 1929. He had previously been Deputy Collector of Customs in Portland.

SECTION TWO

The York Shore Water Company

The York Shore Water Company was organized in 1895 to serve the towns of York and Wells with pure water, and to protect the waters of Chase's Pond. Construction began on February 13, 1896, and water was turned on in York Village on May 23 of that year.

THE TOWN OF YORK HAD BECOME A FAST-GROWING summer resort by the 1890s and large numbers of hotels and cottages were being constructed in York Harbor, York Beach, and York Cliffs. The need for a reliable supply of pure water became a priority for local businessmen, who realized that future growth would be restricted to those areas where water was available. The large wooden buildings were also fire hazards, and hydrants fed by a reliable supply of water were badly needed.

There were several attempts to form water companies for this purpose. In 1887 the Maine legislature granted a charter to Frank P. Emerson and Edward O. Emerson, creating a corporation under the name of York Water Company. Its purpose was to supply water to the inhabitants and the Town of York for domestic purposes and for fire protection. Frank P. Emerson died shortly after the company was chartered and the project never got off the ground. In January, 1889, J.A. Farrington, a civil and hydraulic engineer, recommended that a new charter be prepared or the company be enlarged so that the inhabitants and towns of Eliot and Kittery, as well as York, could be supplied with water. He suggested that the supply could be increased by including the waters of Chase's and Folly Ponds in York and York Pond in Eliot as the sources of water for the new company. Farrington indicated that these were the sources of supply named in the act incorporating the original York Water Company. Apparently, the rights granted to the Emersons were lost when a charter was granted to a new York Water Company headed by J. D. Vermeule, President, and C. C. Vermeule, Treasurer. This company advertised a \$25,000 bond issue in June, 1899.

The Agamenticus Water Company was incorporated in 1899 by Mark F. Wentworth, John Wentworth, Edward S. Marshall, Samuel W. Junkins, Wilson M. Walker, Timothy Dame, Moses A.



■ *The new dam at Folly Pond. Sunday was the day that visitors came to view the dam construction and be photographed by Angevine Gowen.*

Safford, John B. Donovan, and Lucius H. Kendall. The corporation was authorized to purchase the property, rights, and franchises of the York Water Company and began to develop a water supply by building a dam at Folly Pond. The dam was completed in 1901. This company later became the Kittery Water District which served parts of York, Kittery, and the shipyard in Kittery.

Still another water company, the York Shore Water Company, was organized on May 7, 1895 for the purpose of supplying the towns of York and Wells with pure water for domestic and municipal purposes, including fire protection. On January 27, 1896 the directors of the York Shore Water Company voted as follows:

That Chase's Pond and the water rights connected therewith be purchased by this company at a price not exceeding \$25,000, to be paid for in the stock of this company at par.

Chase's Pond offered an excellent and the most readily available source for a water supply at the time the company was organized in 1896. To develop any other source would have involved greater cost because of the expense of either building a dam or a longer pipeline than was required for the Chase's Pond project. The history of the company showed clearly that the water main extensions were made only after careful consideration, and it is reasonable to assume that when the directors voted to pay \$25,000 for the water rights they were satisfied that it was a fair price. It



■ Gowen's photograph of the dam on the fourth Sunday of the construction project. Note the armed guard sitting on top of the stonework.

appears to be the purchase price agreed upon by willing buyers and a willing seller.

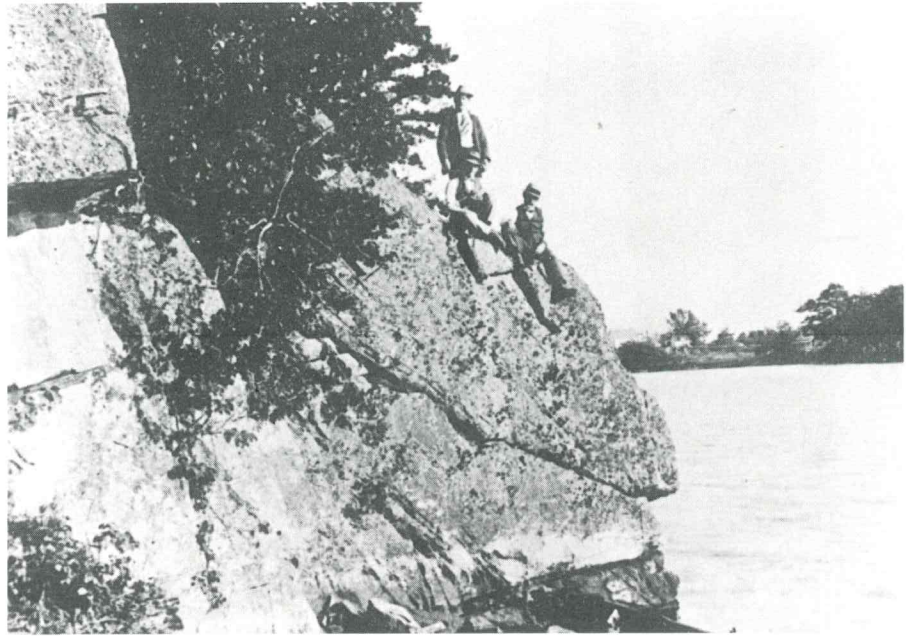
The capital stock of the company was fixed at \$50,000 but increased to \$100,00 on January 17, 1896. In 1911 the charter was amended to provide that water could be supplied for manufacturing purposes and for the supply of shipping. The company was authorized to hold real and personal property not to exceed \$400,000 in value. Bonds could be issued for the construction and maintenance of its works—*not to exceed the amount of its capital stock*. In 1916 Josiah Chase petitioned the Maine Public Utilities Commission (a regulatory agency established in 1913) for the authority to issue first mortgage refunding bonds in the sum of \$30,000, in order to refund bonds that were maturing on April 1, 1916. The Commission pointed out that the total bonded debt was \$96,000 but the capital stock actually issued was only \$62,000. The total bonded debt exceeded the capital stock issued by \$34,000, and the law read: *the corporation may issue bonds not exceeding its capital stock*. However, the PUC did not choose to rule on this issue and the Water Company was allowed to issue its mortgage bonds to refund those bonds that were maturing.

The incorporators of the York Shore Water Company were Josiah Chase, Lindley M. Webb, Will R. Howard, Wilson L. Hawkes, Hartley W. Mason, Jeremiah P. Simpson, John E.



■ *Wilson L. Hawkes was one of the incorporators of the York Shore Water Company.*

Norwood, John H. Varrell, and John L. Chase. Josiah Chase was the first president of the company and, until his death in 1928, was the moving spirit and the controlling factor in its development. He was a lawyer who terminated his duties as Deputy Collector of Customs for the Port of Portland to return to York and devote his energies to the development of the water company. Chase was also an environmentalist who is remembered by Ogunquit residents for his gift of the "marginal way" to the town in 1925. However, in his zeal to protect the watershed of Chase's Pond, he attempted to take several lots by exercising the right of eminent domain in cases where the courts decided that he was taking the land for *private* rather than *public* purposes. In effect, the court ruled that taking timberland as fire protection for the timber on land owned by the water company was a private use, and it ruled against Chase. In



■ Survey crews charted the shoreline of Chase's Pond to help determine what land should be taken for the watershed.



■ The settlement at Chase's Pond in 1923. It was still a tourist attraction, and photographs of these scenes eventually became postcard views.

the case of *York Shore Water Company v. Card*, land was taken by eminent domain but the water company decided to abandon the taking after the value of the property was determined. The court ruled for Card, saying that the Corporation could appeal the award but it could not substitute abandonment for appeal, otherwise the property of private citizens would be at the mercy of public service corporations.

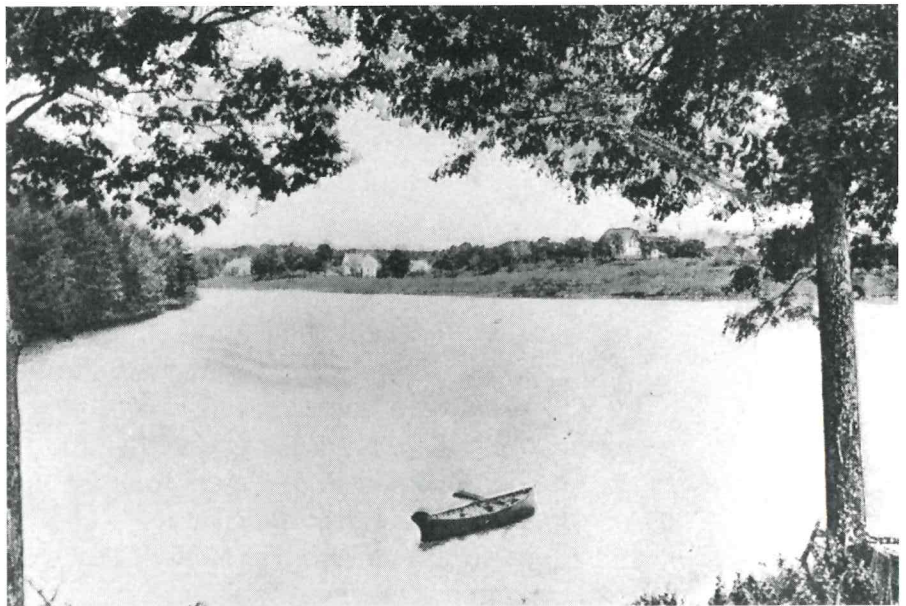
Frank Fuller, a consulting engineer from Boston, was employed in January, 1896 to advise

on the size of pipe needed for the York Beach supply main. In February a contract was awarded to the New England Public Works Company for excavating the trench and laying the pipe. The president issued a contract for driving piles in two swamps along the route of the pipe at a cost of \$675. Water was turned into the supply main as far as York Beach on May 21, 1896. On May 22 water was turned on as far as Sea Cottage (Anchorage), and on May 23 water was turned on to York Harbor. It was July 17, 1908, before the supply main to York Corner was completed.



■ *Italian laborers were brought in from nearby cities to dig the trenches and lay the pipe. Between 1896 and 1902 they were paid from \$1.35 to \$1.40 per ten-hour day.*

According to the records of Josiah Chase, unskilled Italian labor was used on this project, and from 1896 to 1902 the laborers were paid at the rate of \$1.35 to \$1.40 per ten-hour day. In 1914 comparable labor rates were about \$2.25 per nine-hour day. After the start of World War I the labor rate doubled to 50 cents per hour or greater. The available supply of labor in the vicinity of York was not sufficient to carry out the construction of a water works system. Nearly all of the unskilled labor had to be brought in from the greater Boston area.



■ *Much of the shoreline of Chase's Pond had to be explored by boat because the terrain was rugged and there were no access roads.*



■ *Civil engineers and surveyors explored the shoreline to determine how raising the level of the pond would impact on the shoreline.*

The records of the company show that it was the policy of the officers to purchase land bordering Chase's Pond at every reasonable opportunity. Every effort was made to protect the sanitary quality of the water supply. The records also show that extensions were made to the system from time to time. This was an indication of a growing demand for water and the policy of the directors to supply this demand as soon as possible.

The long awaited water distribution system was fully activated in York Beach in 1900, and the proponents of fire protection were on hand to test the hydrants. Will Hildreth borrowed fifty feet of hose and a nozzle from the Portsmouth fire department because there was no such equipment in York. The demonstration was conducted in the middle of the business district from a hydrant located on the corner by the Goldenrod. Frank H. Ellis held the nozzle while the water was turned on. The results were convincing enough for Will Hildreth and Herbert E. Gordon to begin circulating papers calling for the acquisition of new fire hose for the York Beach Hose Company, which had been organized three years earlier. Carlos B. Mosley and Nathaniel H. Shattuck, residents of Concordville, raised enough money to buy the hose.

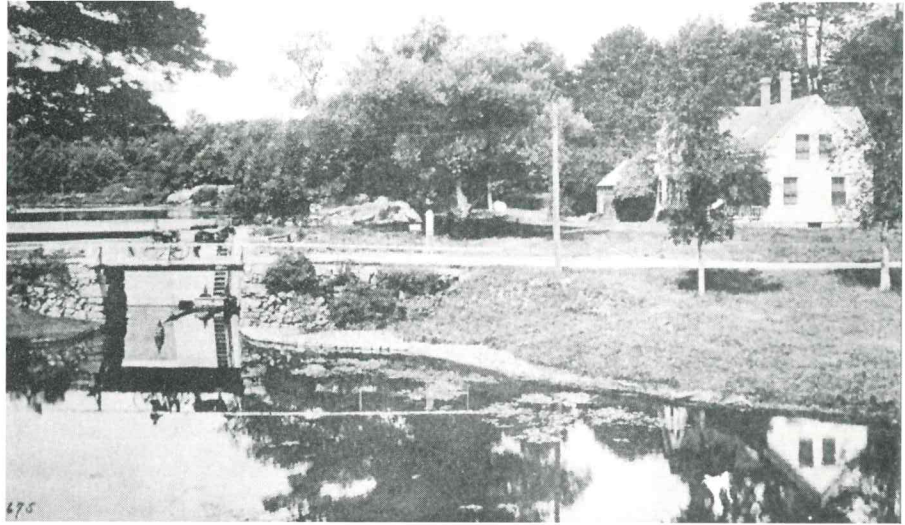


■ The York Shore Water Company had its office in the Lancaster Building in York Harbor.

The Sanborn-Perris maps issued in 1901 and 1913 noted the location of fire hose and hose carts throughout the community. The 1901 maps show a hose cart with 500 feet of 2-1/2-inch hose in a small building behind the Seaview House near the S. P. Huntress livery stable. A second hose cart was located behind the Varrell House across from the Lancaster Block in York Harbor. The 1913 maps show 500 feet of 2-1/2-inch hose stored at the Iduna Hotel on Long Beach. In York Beach 150 feet were stored at 117 Main Street, 300 feet at 106 Broadway, 205 feet at 111 Broadway, and 250 feet at 207 D. Street. The stable and hose cart near the Seaview House were not shown on the 1913 maps. They may have been lost when the hotel burned.

In 1917 Chase went back to the Legislature, which passed *An Act to Authorize the York Shore Water Company to Acquire and Own Certain Local Securities*. This unusual piece of legislation authorized the Water Company to acquire and own stock in the Marshall House, which was being rebuilt after being destroyed by fire in 1916. The purchase was subject to the approval of the Public Utilities Commission.

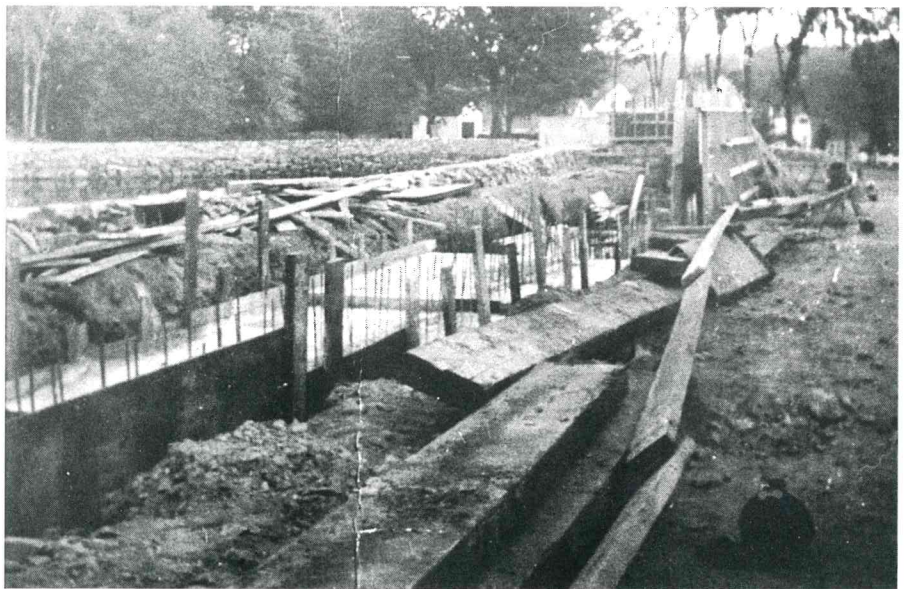
Census reports indicate that the resident population of the Town of York varied from 2,444 in 1890 to 2,802 in 1910 and 2,727 in 1920. Probably not more than three-quarters of this population was supplied with water by the company, but no exact count was available. In October, 1929 the number of services was 1,209. This number included hotels and rooming houses which were on sum-



■ The Trafton house at right was moved across the road when the new dam was built.

mer lines. A rough estimate would give the population served during July and August as between 8,000 and 10,000, with about 2,800 persons using the distribution system during the winter.

The water distribution method was essentially a low pressure gravity system. The pressures in the mains in the centers of York Village, York Harbor, and York Beach, where fire protection was furnished, varied from 30 to 50 pounds per square inch . These pressures varied according to the topography and with variations in the rates of consumption. In order to reach the pressures neces-



■ The spillway of the dam rested on solid ledge, which was blasted at the time of construction to provide a solid foundation. c1906.

sary to fight larger fires, it was necessary to use a pumper. In 1929 there were pumpers located in York Village and York Beach. The York Beach hose wagon also carried a Barton pumper. Fifty-two of the 118 hydrants had a nozzle for a pumper and all hydrants had connections for 2-1/2-inch hose. All but one of the hydrants was connected to the main by a six-inch line.

A timber crib and earth dam was in place when the system was taken over by the water company. It was rebuilt during the winter and spring of 1906-7. A concrete structure of gravity type with a reinforced concrete intake well and screen chamber replaced the timber crib spillway section. The spillway, as well as the core wall in the earth section, rested on solid ledge rock, which was blasted at the time of construction to provide a solid foundation and to prevent seepage through the base of the dam. Considerable work was done on the lands adjoining the reservoir, including tearing down buildings and cleaning up debris, in order to preserve the purity of the water.

The distribution system began at the dam, where water entered a screen chamber through two short intake pipes terminating in 16-inch gate valves in the chamber. Grooves permitted the raising and lowering of screens in the chamber. Water left through two 16-inch mains, one leading to York Beach and one leading to York Corner. The screen chamber could be emptied through two 4-inch outlets provided with gates leading to a drain that discharged in the brook below the dam. The York Beach supply line, laid in 1896, had a total length of 13,502 feet, and the York



■ *The Pond in winter. An Angevine Gowen photograph.*



■ *The wooden tank at York Heights had a 20,000 gallon capacity.*

Corner line, laid in 1908, was 17,654 feet long. On each of the lines there were considerable distances where the pipe was laid above the ground or close to the surface. Two sections of the York Beach line passed through swamps where the pipe was laid on wooden cross pieces supported by two wooden piles. By 1929 some of these cross pieces and the tops of some of the piles had rotted away, but the pipeline remained in place and was in good condition. There was no evidence of trouble caused by freezing in the mains and there had been no breaks since they were built.

The total length of pipe in the distribution system was 43.57 miles. Of this total, 58 percent was composed of cast iron pipe six inches in size or larger. The cast iron pipe laid in 1896 was coated with Dr. Angus Smith's patented coal-tar varnish, applied hot, and similar material was still being used in 1929.

There was a small area at York Heights where the ground elevation was too high to provide domestic service by gravity from Chase's pond. To serve this area a small pumping plant with a wooden tank of 20,000 gallons capacity was built on a steel tower in 1915.

A large portion of the distribution system was for furnishing summer service. This included cottages, boarding houses, and hotels that were open for the short summer season and closed for the remainder of the year. Most of these pipes were laid on the surface of the ground and had to be drained every fall to prevent

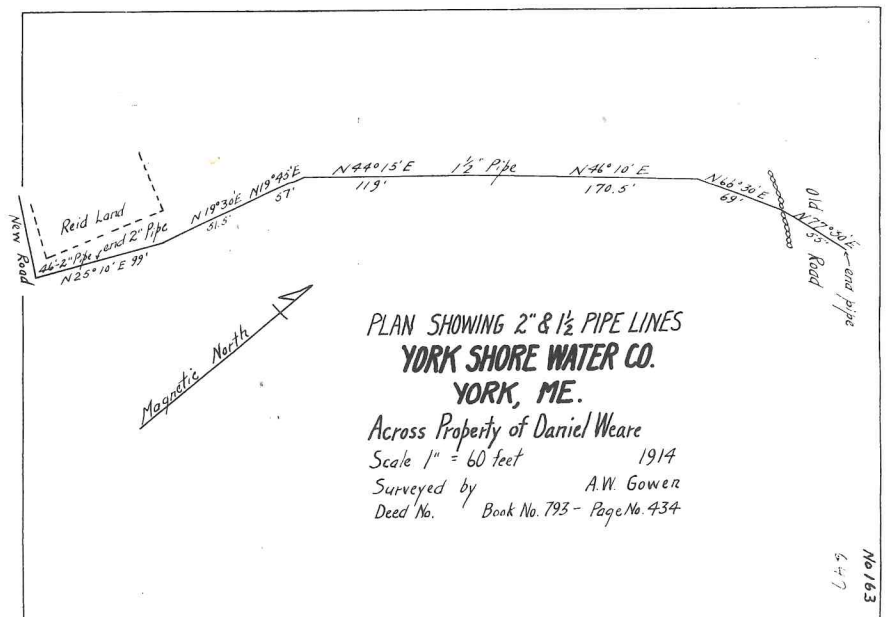


■ *Angevine Gowen was a civil engineer who did much of the surveying for the pipelines. He was also a photographer who documented many of his projects on film.*

them from freezing. Raymond Weare at Bald Head Cliff was given year-round service through a short run of summer line by leaving a drain valve open so as to bleed the line continuously and create sufficient flow to prevent freezing. In this case it was cheaper to bleed the line than to bury the pipes in the rocky ground.

The river crossing at Sewall's Bridge was done with a 6-inch cast iron pipe installed in 1907 and two 8-inch cast iron lines installed in 1914. The two 8-inch lines were laid with flexible joints, while the 6-inch line was ordinary bell and spigot pipe laid according to a template on the bank and floated into position. One of the 8-inch lines was broken and abandoned, leaving only two lines in operation.

There was a submerged crossing at the Cape Neddick River near the Shore Road where an 8-inch pipe was laid just below the level of the clam flats. A short, submerged, 8-inch line was located in Lindsay Road under the tidal arm of the York River. There is a submerged 6-inch line on the Post Road under the Cape Neddick River. Another short underwater crossing, using 4-inch pipe, was located on the Shore Road near Talpey Inlet. Finally, on South Side Road there were 147 feet of 6-inch pipe along the bottom of the



■ A plan drawn by Gowen for the York Shore Water company.

pond, but it can be assumed that this pipe was laid before the pond was filled with water.

There were seventy dead ends in the distribution system, twenty of which were for summer service only. The other fifty had no circulation of water except for that caused by leaks or by the flow of water through service pipes.

A schedule of rates was adopted on June 21, 1905 and remained in force until March 1, 1929, when a new schedule became effective. The new schedule, approved by the Maine Public Utilities Commission, called for a reduction in several items and an increase in a few:

Reductions in annual rates:

Second bathtub from	\$3.00 to \$2.00
Second toilet	\$4.00 to \$2.00
Second urinal	\$3.00 to \$2.00

Increases in annual rates:

Additional lavatories from	\$1.00 to \$2.00
Hand hose	\$3.00 to \$5.00

There was a marked increase in revenue in 1929. which was attributed to proper billing as a result of inspection of many of the premises. In other words, improved management practices were reflected in an increase in revenue.

A report issued by the engineering firm of Metcalf & Eddy estimated that the fair value of the property of the York Shore Water Company, exclusive of lands and rights-of-way, as of October 1, 1929, was at least \$475,000.



■ *Ice cutting. Many ice ponds were flooded by the water company to insure a good ice harvest.*



■ *Special rates were established for owners of ice ponds who wanted them flooded by the water company.*



■ Ice from Norton's ice pond was delivered to residents and vacationers during the warm summer months.

York Village, Me., Dec 14 19 31

Water District
TO YORK ~~SHORE WATER CO.~~, DR.

Harry W. Norton
York Beach

Water For Season of 19	
For use in ice Pond	
Water serv. Chge	\$ 1.00
Water used	68.00
	\$ 69.00

Dec 14

Note—Bills for water are due and payable in advance. This company reserves the right to shut off water if bills are not paid promptly.

■ A bill for flooding Norton's ice pond in 1931. Apparently the new water district was still using the old York Shore Water Company billheads.

SECTION THREE

The York Water District

The York Water District is hereby authorized and empowered to acquire by purchase or by of the right of eminent domain, the entire plant, property, franchises, rights and privileges of the York Shore Water Company.

AN ACT TO CREATE THE YORK WATER DISTRICT WAS passed by the Maine State Legislature on February 22, 1929. The district was empowered to take, hold, divert, use, and distribute water from Chase's Pond. It was authorized to take and hold for public use any lands or water rights necessary for erecting and maintaining dams, for flowage, for power, for pumping its water supply through its mains, for reservoirs, for preserving the purity of the water and watershed, for laying and maintaining aqueducts, for taking, distributing, discharging, and disposing of water and for rights-of-way or roadways to its sources of supply, dams, power stations, reservoirs, mains, aqueducts, structures, and lands.

In August, 1929, at a special election, the inhabitants of the Water District accepted this act of the Legislature with but three dissenting votes. At that time Charles C. Goodrich, Joseph W. Simpson, Lester M. Bragdon, Charles H. Todd, and George A. Chase were elected Trustees of the District. The Trustees elected Charles C. Goodrich to be the first President. Lester M. Bragdon was chosen to serve as both Clerk and Treasurer.

Terms of office for the five Trustees were determined by drawing five slips of paper, each bearing the name of a trustee, from a hat while slips of paper numbered from one to five were simultaneously drawn from another hat. The trustee whose name was written on the first slip, served the number of years that was written on the second slip. The results were as follows:

- Charles H. Goodrich to serve one year;
- Charles H. Todd to serve two years;
- George A. Chase to serve three years;
- Joseph W. Simpson to serve four years;
- Lester M. Bragdon to serve five years;

It was ironic that Goodrich, the man who received the largest number of votes, ended up with the shortest term of office.

The following letter was sent to the Incorporators of the York Shore Water Company:

York Village, Maine
August 22, 1929

To the York Shore Water Company
York, Maine

Gentlemen:

We are advised by counsel that it is quite possible that the charter under which we are acting may require us to make you an offer for your plant, franchises and such other rights and interest as we may acquire under the charter, before the first day of September, 1929.

We have been anxious to make such an offer as would be fair to the people of our district as well as to your company, but owing to the limited time since our appointment, we have been unable to obtain the information which seems necessary for the making of such an offer as we would like to make. We are therefore compelled to act upon the limited information which we have. Please to understand that the offer which we make is without prejudice to our rights to show that the property which we are to acquire may be worth less, and we feel that under the circumstances any refusal on your part to accept our proposition should in no way prejudice you, as full and complete investigation may show our offer to be too high, or show it to be too low.

Performing our duty as best we can under the circumstances, we hereby offer you the sum of Two Hundred Thousand Dollars (\$200,000.00) for your plant, franchises and such other rights and interests as we are to acquire under the enabling act, subject to the debenture bonds, mortgages, liens, and incumbrances thereon, and all of which are to be assumed by us, and on the ascertainment of their amount the same is to be deducted from our offer and the balance paid to you in cash.

Sincerely Yours,

Trustees of the York Water District

The Trustees and the York Shore Water Company were unable to agree upon a purchase price and in May, 1930 the Trustees proceeded to take the property by the right of eminent domain. The Supreme Judicial Court appointed three appraisers to fix the value, and they hired prominent engineers to make a thorough examination of the system. A hearing was held in Portland before the appraisers, and on November 3, 1930 they made an award of



■ *James H. Lucas was the first superintendent of the York Water District, a position that he held for nearly forty years.*

\$376,734.21 as the fair value of the plant, property, and franchises of the York Shore Water Company. On payment of this award, the property passed to the York Water District and the Trustees began conducting its affairs.

There were eight applicants for the position of Water District Superintendent, and several local men could not attract enough support to be selected. Five candidates were rejected before the Trustees voted that the position be offered to Ralph E. Manson of Calais, Maine at an annual salary of \$3,000. Manson accepted the offer on December 19, 1930 but on the following day he sent this telegram:

With regret am obliged to cancel acceptance as per letter yesterday. Explanation following. R E Manson

The trustees moved quickly to fill the position by voting to accept the application of James H. Lucas. He held the position for nearly forty years.

The Trustees approved a bond issue in the amount of four hundred thousand dollars (\$400,000) with the Fidelity Trust Company of Portland, Maine. The bonds were dated January 1,

1931, and they provided the funds to finance the takeover of the York Shore Water Company, including the legal and engineering fees involved in the eminent domain proceedings.

Health issues were also on the agenda during the first year of the Water District operation. Pollution was a concern, and a search for the source led to the farm of Oliver Jenness, whose pastures were on the shores of the pond. Trustee Lester Bragdon had met with Jenness in an attempt to reach some arrangement to eliminate the pasturage of cattle on the portion of his premises that drained into Chase's Pond. This was considered a source of serious pollution, and Bragdon and Superintendent James Lucas were authorized by the Trustees to reach some definite arrangement that would protect the water supply.

Doctor Edward M. Cook, Health Officer of the Town of York, had been urging the Trustees to install permanent chlorinating equipment to protect the water supply against contamination by such pollutants. The Trustees asked Lucas to provide them with information about the cost of installing permanent chlorinating equipment and the cost of any changes in the mains that might be required to insure that the system would operate effectively. They later met with Dr. Cook and a representative from the Wallace & Tiernan Company to discuss the issues involved in chlorinating the water supply of the District. At the conclusion of this meeting they voted to purchase the Manual Control Chlorinating Equipment quoted by Wallace & Tiernan at approximately \$900 if the system was approved by the State Department of Health.

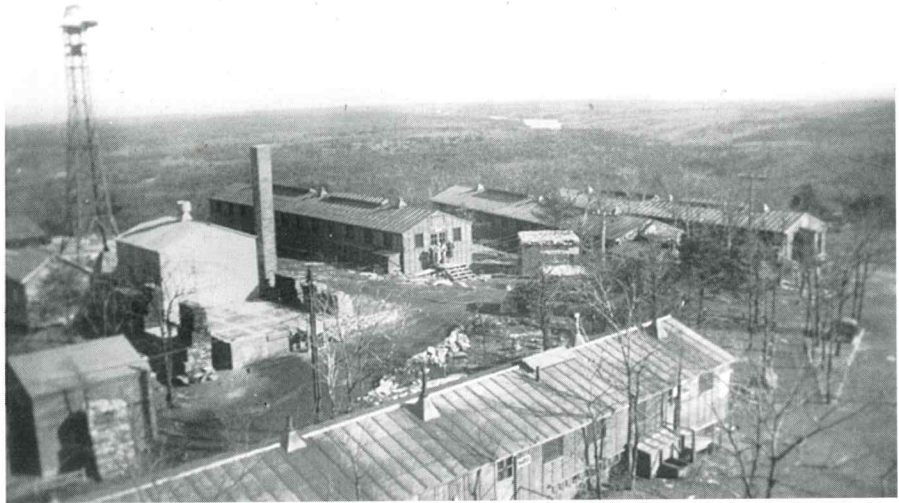
The Trustees compiled a list of trades and occupations that would be employed on their next project and established minimum hourly wage rates based on rates for work of a similar nature in the locality. This was during the period of the Great Depression and manual laborers were readily available for most projects that generated opportunities for employment. They were compensated as follows:

Common labor	40 cents per hour
Blaster-powder man	80 cents per hour
Carpenter, forms & buildings	80 cents per hour
Carpenter, apprentice	40 cents per hour
Cement, finisher- builder work	80 cents per hour
Concrete, puddler, rodder, spreader	40 cents per hour
Formsetter, building	50 cents per hour
Ironworker, structural	80 cents per hour
Operator, air compressor	50 cents per hour
Operator, hoisting engine (three drums)	80 cents per hour
Operator, hoisting engine (one or two drums)	80 cents per hour
Operator, jack hammer or drill runner	50 cents per hour

Operator, mixer (27E and up)	80 cents per hour
Operator, mixer (over 108 or under 278)	50 cents per hour
Operator, mixer (108 or 10E or smaller)	50 cents per hour
Operator, motorized equipment	80 cents per hour
Truck Drivers, 1-1/2 ton & under	40 cents per hour
Truck Operators, over 1-1/2 tons	50 cents per hour
Painter	80 cents per hour
Plumber	70 cents per hour
Plumber, helper	50 cents per hour
Pipe Layer, water, gas	40 cents per hour
Pipe Fitter	80 cents per hour
Pipe Fitter, helper	50 cents per hour
Roofer, sheet metal	80 cents per hour
Roofer, helper	50 cents per hour
Reinforcing Steel Worker, building construction	80 cents per hour
Reinforcing Steel Worker, helper	50 cents per hour
Rigger, general	80 cents per hour
Shorer, trench bracing, etc.	50 cents per hour
Teamster & Team	1.20 cents per hour
Teamster Driver	40 cents per hour

The office of the York Water District was in the York County Trust Company building on the square in York Village. The bank had been closed after the stock market crash and many local people lost their savings. There followed a general mistrust of banks and many residents kept their money at home rather than trust it to the bankers. The York County Trust Company reorganized as the Community Trust Company and sold stock in the bank to raise the capital needed to finance the new business. Charles H. Todd, President of the Water District in 1934, strongly objected to the vote of the District Trustees to subscribe to forty shares of stock in the Community Trust Company, and he resigned. Harry Hutchins replaced him on the Board and George A. Chase became the new President. Chase served as President of the Board until his retirement in 1962. During his twenty-eight years of leadership, the water system evolved and grew with the community. George Chase, a quiet, unassuming man, was dedicated to public service and was highly respected by the people that he served.

Cato R. Philbrick met with the Trustees in the summer of 1940 to discuss the proposed development of Agamenticus Mountain for winter sports. Philbrick was co-owner of a large tract of land on top of the mountain but the development proposal included land owned by the York Water District.. He received approval to use the land necessary for building a parking area on both sides of the Mountain Road and for the building of a tramway and ski trails. Philbrick was granted a twenty-year lease subject to his



■ *The military base on Mount Agamenticus in April, 1946.*



■ *During the war years members of the 551st Signal Battalion occupied the mountain top where they operated a radar system.*

meeting the sanitary conditions imposed by the Water Company. The group was to pay the York Water District a fee based on 5% of the value of the land. However, no payments would be made *until the development made a net profit.*

In December, 1941 the Japanese attack on Pearl Harbor plunged the country into war, and plans to build a ski resort were replaced with plans to build a military facility. Once again, Water District Trustees were involved in negotiations for the use of their land on the mountain. Members of the 551st Signal Battalion of the United States Army occupied the mountain top, where they

erected a radar tower. The first arrivals lived in tents until barracks were built in 1942. Approximately twenty-five men were stationed there to operate the radar system that was installed to protect the coast. The unit included cooks, carpenters, and radar operators. There was one civilian on the site who served in the lookout tower. It appears that the Army simply occupied the mountain top, because it was August 9, 1943 before the Trustees voted to notify the Army that the District would be willing to sign a lease for the land in question on Agamenticus.

It was 1963 before the Directors of the Agamenticus Mountain Corporation reappeared before the Trustees to obtain a lease of land for a right of way over Water District land on the southerly side of the mountain. It was the intention of the Agamenticus Mountain Corporation to build a ski resort at the mountain, and the right of way was necessary to improve and maintain the road leading from the town highway to the top of the mountain. There was considerable discussion about the use of salt on the road and its affect on the water supply of the District. A twenty-year lease was granted and the resort developers were permitted to build a parking lot on District land near the base of the mountain. The Trustees also voted to give the Corporation two diesel engines, pumps and other appurtenances that were housed in the pumping station at the head of Chase's Pond, providing that they remove the pumphouse from the site and clean up the area. The system was moved to the mountain and used to power the snow-making equipment. The ski resort was finally built after a twenty-year delay but was doomed by a lack of snow and closed after a few winters of operation.

The Navy Yard in Kittery was supplied with water by the Kittery Water District which drew its water from Folly Pond in York. During the war period the yard employed thousands of workers to build the submarines which helped turn the tide in the Pacific. The population of Kittery swelled and the Navy Yard operated around the clock. There was concern that the demand for water would exceed the capacity of Folly Pond, particularly if there were a drought. Accordingly, the York Water District agreed to supply water to the Kittery Water District through a pipeline between Chase's Pond and Folly Pond. The conditions of the contract were:

1. This contract will run for the period of the emergency as declared by the President of the United States.
2. The rights hereby granted to the Government may be conveyed by the Government to the Kittery Water District but the obligation of payment shall remain with the Government.
3. The Federal Government shall be permitted to take the surplus

water from Chase's Pond for pumping into Folly Pond. Such water in the Lake is to be classified as surplus water as long as the elevation of the pond is above the spillway of Chase's Pond dam. All water pumped from Chase's Pond is to be measured by meter and charged for at the rate of six cents per hundred cubic feet, with a minimum charge of \$5,000 and a maximum charge of \$10,000 per year. The Federal Government is to have the privilege of taking such surplus water as may be desired provided that the \$10,000 maximum has been reached.

4. The year shall be the calendar year.
5. If additional water is desired by the Federal Government after the elevation of the lake is at the same elevation as the spillway, the Federal Government is to pay for such water at the rate of six cents per hundred cubic feet, with the provision that no water shall be taken that is deemed necessary for the consumers of the York Water District.
6. By virtue of Chase's Pond becoming part of the water supply for the Portsmouth Navy Yard, the York Water District shall **not** be forced to assume the cost of providing armed guards for the protection of Chase's Pond.

It was also pointed out that additional storage could be available for the Government by increasing the height of the dam and embankment and filling in the low place near the intersection of Chase's Pond Road and Scituate Road.

The Federal Works Agency built a pumping station at the head of Chase's Pond and installed a pipeline between the two ponds. Land for the pipeline was leased from the York Water District for twenty years. With the system in place, the government was assured that there would be adequate water to supply the Navy Yard during the critical wartime period. When the lease expired in 1963, the pipeline and pumping station were abandoned in place and their pipeline became the property of the York Water District.

Once the war ended, construction materials became available for domestic projects and the Trustees could concentrate on expanding and upgrading the water system. In 1949 they approved a five year contract with Superintendent James Lucas who had served in the armed services from 1942 to 1945. During his absence they employed Richard Barstow (1942-1944) and Charles H. Tucker (1944-1945) to carry out the responsibilities of the superintendent. They also purchased a lot on Woodbridge Road from Cato R. Philbrick for \$1,200. The plan was to build a facility that would provide office space, a workshop, and storage for their trucks and other equipment.

The following year they awarded a contract for \$54,912.50 to the O. W. Miller Company to raise the dam at Chase's Pond. Metcalf

and Eddy had prepared final plans and construction drawings for a proposed pumping station, spillway, and dike, which would increase the capacity of the reservoir and insure that the resource would be able to meet the needs of an expanding population.

In 1956 the engineering firm of Camp, Dresser & McKee was engaged to prepare plans, specifications and contract documents and supervise construction of the following improvements:

Water Main Construction

1. Approximately 3,500 feet of 16-inch pipe running across-country from the 16-inch supply main to the Post Road.
2. Approximately 5,500 feet of 16-inch pipe in Nason Road from Post Road to Ridge Road.
3. Approximately 1,850 feet of 16-inch pipe in Ridge Road from Long Sands Road to Nason Road.
4. Approximately 1,100 feet of 16-inch pipe in Ridge Road from Nason Road to Main Street.
5. Approximately 1,850 feet of 10-inch pipe in Ocean Avenue and Norton Avenue from Long Beach Avenue to Ridge Road.

Cleaning Existing Mains Ten Inches and Over in Size

1. Approximately 29,000 feet of pipelines in open country.
2. Approximately 37,000 feet of pipelines in streets.

Other Improvements

1. The construction of a new wing on the pumping station and the installation of new chemical feeding equipment.



■ *George A. Chase served as a trustee of the Water District from 1929 to 1962. He served as President of the District from 1934 to 1962.*

On April 26, 1957 the Trustees authorized the issuance of \$430,000 in bonds to finance a program of improvements that would add 21,850 feet of 16-inch mains, 1,850 feet of 10-inch mains, 37 hydrants, expand the pumping station to install chemical feed drains, and build a new shop-garage building on Woodbridge Road. This was a major expansion project that would revitalize and expand water service in York.

Improvements continued when, in 1962, the elevated tank on York Heights was removed and replaced with a 1,500 gallon pressure tank. In 1965 the Trustees voted to give Maurice Weare a deposit of \$500 on a lot to be the site of an elevated water tank that would improve the water service in the Bald Head Cliff section of York. A month later they purchased the lot behind the Episcopal Church for \$1,500. According to the Trustees, it was the only lot that Weare would sell to the District, and it was directly behind St. Peters-by-the-Sea Episcopal Church.

In January, 1966 employees of the Water District stripped the lot and built an access road to the site. The foundation for the tank



■ When George A. Chase retired from the Board in 1962 he received this gold watch, which was inscribed, "George A. Chase Trustee York Water District 1929-1962."

was started in September and completed in October. The tank was shipped from Pennsylvania in October, and following its arrival construction started. On or about October 10, 1966 the Trustees of St. Peters complained to the Trustees of the Water district with regard to the location of the tower and its effect upon the aesthetic setting of the church. Numerous discussions followed but the Water District Trustees felt that they were obligated by contract to complete the construction of the tank. Maurice Weare balked at selling another lot in the area. When threatened with eminent domain he pointed out that it was unconstitutional for the District to exercise its power solely for the purpose of maintaining the aesthetic setting of St. Peters Church. They learned, as Josiah Chase had learned, that they could not use the power of eminent domain to take land for *private* purposes.

The Trustees of St. Peters found another site, but the engineers determined that it would cost \$22,000 plus the cost of the lot to move the tower. The Church Trustees offered to contribute \$5,000 to assist in relocation of the tower. The York Water District Trustees were faced with the following dilemma:

1. The Water District was contractually obligated to build the water tower, which was nearly completed.
2. The tower was located on the only site offered by the landowners.
3. Most area residents and church members were convinced that the location was unacceptable.
4. An alternative site could not be taken, legally, by eminent domain



■ St. Peters-By-The-Sea on the Shore Road as it appeared in 1922.



■ *The church and water tower as they appeared in January, 1967.*

- and the owner was reluctant to sell.
5. A third site had been offered, but engineering studies indicated that it would be expensive to move to this site.
 6. York Water District subscribers would ultimately pay the cost of moving or removing the water tank and tower. The Public Utilities Commission, which had approved the construction of the tower, would need some resolution that would justify the expense involved.
 7. The Water District Trustees were trying to upgrade the water service on Bald Head but seemed to be receiving little support from the people who would benefit most from the improved service. The Trustees also needed some resolution that would justify the expenses involved.

A bill was passed by the 103rd Legislature calling for the voters in the district to vote on the following question:

Shall the provisions of an Act entitled 'An Act to authorize and direct the relocation of a certain water tower of the York Water District', as passed by the 103rd Legislature, be ratified?

The total number of ballots cast was 751. Of these, 577 favored removing the tower and 173 were opposed.

On May 3, 1968 the Trustees voted to ask for bids for demolishing the water tower at Bald Head Cliff. Three weeks later they voted to accept the bid of John J. Duane Building Wrecking

Company to demolish and dispose of the tank for \$7,500.

On December 8, 1969 the Trustees received a letter of resignation from Superintendent James Lucas, who had managed the York Water District since 1930. The letter read:

*Board of Trustees
York Water District
York, Maine*

Gentlemen:

I hereby submit my resignation as Superintendent to become effective January 1, 1970. Ill health has forced me to take this action.

The many years that I have spent with the York Water District have given me great satisfaction and have left me with a feeling of accomplishment. I am happy to have had a part in three major expansion and improvement programs.

I have enjoyed my work and my relationship with both the trustees and employees.

*Sincerely,
Jim*

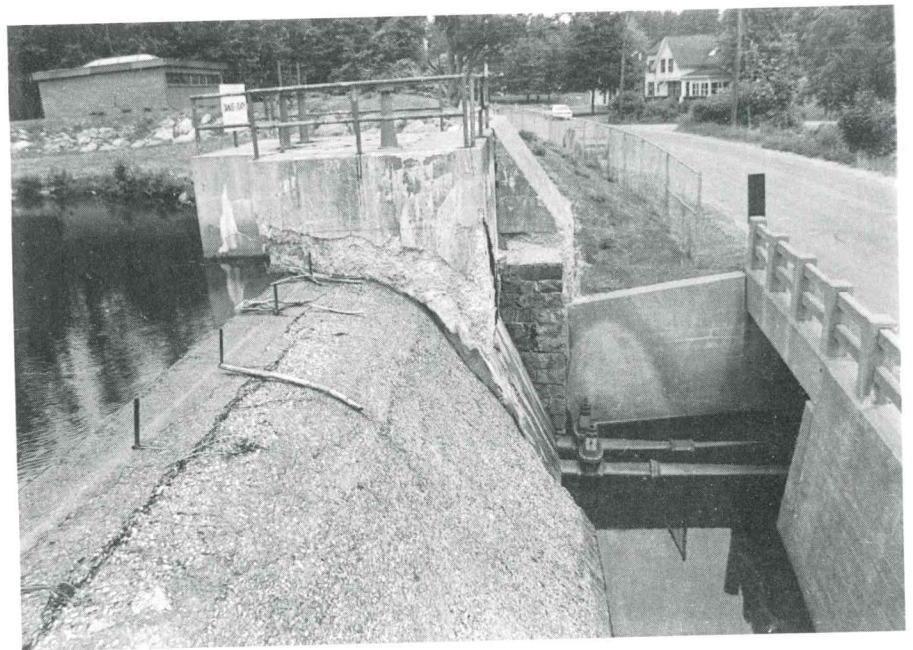


■ Robert O. Donnell, who served as Superintendent of the Water District from 1970 to 1976. A long-time employee of the District, Bob was familiar with every aspect of the operation.

Robert O. Donnell, a long time employee of the District was appointed Superintendent to succeed Jim Lucas. He served in that capacity until 1976 when he retired with twenty-seven years of service to the District. He was replaced by David C. Michniewicz as Superintendent in November of 1976.



■ Chase's Pond dam during the 1987 rennovation.



■ Spillway of the dam showing its condition prior to rennovation in 1987.

SECTION FOUR

Implementing a Master Plan

The population of York increased from 5,690 people in 1970 to 9,350 people in January 1980. This 64% growth has been due to the construction of year-round residences in many areas of town. The recent construction of the high school reflects the growth of the town.

OVER THE YEARS, A NUMBER OF REPORTS HAVE BEEN prepared by engineers to guide the decisions of the Trustees in their efforts to provide water services to the community. In 1930 Hazen and Everett of New York prepared a report on the capacity of Chase's Pond and the existing water use. In 1942, Metcalf & Eddy of Boston studied various means of increasing the safe yield of the water supply.

Based on earlier studies, in 1950 the level of the pond was raised by two feet to a new spillway. Shortly thereafter a two-million-gallon-per-day pumping station was built to meet peak summertime demands. A second pump was added in 1954 to increase pumping capacity.

The firm of Camp, Dresser, and McKee of Boston was retained in 1955 to prepare a comprehensive plan for the York Water District. This plan resulted in a number of improvements, including construction of 22,000 feet of 16-inch pipe and 1,800 feet of 10-inch pipe, installation of chemical treatment with sodium hydroxide to reduce corrosion, and cleaning of 67,000 feet of 10- and 16-inch pipe and 4,000 feet of 8-inch pipe. The engineers found that the hydraulic capacity of the distribution mains had been reduced by 50% due to tuberculation. (Knobs of rust formed on the interior of cast-iron pipes caused by corrosion.) The major new pipe installation was the York Village transmission line, which linked the existing 16-inch York Corner line to York Village and York Beach with 16-inch via the Old Post Road and Ridge Road. These improvements were completed in 1957 along with the construction of an office, shop, and garage.

Ten years later Camp, Dresser, and McKee prepared a second report outlining additional improvements due to growth and expansion of the service area. As a result of this study, a new ser-



■ *David C. Michniewicz replaced Bob Donnell after Donnell resigned in 1976. Under Michniewicz's leadership the trustees adopted a master plan, which resulted in the rebuilding of the distribution system and the construction of a modern treatment plant.*

vice was created by the construction of a two-million-gallon storage tank and a new booster pump station equipped with two 400-gallon-per-minute pumps on Newtown Road. New 12-inch pipe was added in Woodbridge Road and Sentry Hill Road to increase the supply capacity to the existing Sentry Hill storage tank. This new "high pressure area" was tied into the "low pressure area" by using pressure regulating valves, one located at the intersection of York Street and Organug Road and the other at Long Sands Road and Avon Avenue. The study recommended additional distribution system improvements that were not implemented at the time.

Another water system study was reported by Kleinschmidt & Dutting of Pittsfield, Maine in 1976. This study recommended that the York Water District build a water filtration plant plus system and storage improvements. The engineers concluded that the raw water quality in Chase's Pond was not adequate for consumption with only pH adjustment and disinfection. Construction of the plant was also favored by state health officials. The Trustees had plans and specifications prepared

for the treatment plant and for related projects including a new screen house, intake piping, a 30-inch supply line to the Chase's Pond pump station, an access road, and a 700,000-gallon finished water storage tank. These projects were completed by January, 1980, but the Trustees chose not to construct the treatment plant. This decision was based on cost overruns and lack of sufficient evidence indicating the need for, or State regulations requiring, the water treatment plant.

Wright-Pierce Engineers of Topsham, Maine were engaged in 1979 to prepare a twenty-year master plan for water system improvements for the York Water District. This included a schedule of capital improvements designed to meet the objective of supplying water of high quality at appropriate flows and pressures.

The project of highest priority was the construction of new transmission mains and a water storage tank on the northerly side of the system. This would enable the district to abandon the two 80-year-old surface transmission mains, which were adversely affecting water quality and had been rendered inadequate hydraulically by tuberculation and which constituted a serious risk in terms of reliability.

Additional recommendations were made to reduce the amount of water lost through leaking, flushing, and bleeding. In 1979, 57% of the water withdrawn from Chase's Pond was lost, significantly increasing the demand on the system.

Another priority was to repair the dam that was constructed in 1906 with a spillway crest elevation of 154 feet. In 1930 the height of the dam was raised, the embankments on either side of the dam were lengthened, and a dike was added along Scituate Road. Sluice gates and intake screens were also constructed at this time. The U. S. Army Corps of Engineers released a study of the dam in 1980 and reported one displaced cantilever wall panel, surface deterioration of concrete, and deterioration of the upstream dry laid stone wall. Due to the possibility of flooding one house should dam failure occur, the dam had a hazard rating of "significant."

A priority list of improvements was submitted with cost estimates and projected completion dates, as follows:

Project Description	Cost (Million \$)	Possible Completion Date
1. Replace York Village line, new tank, and feed line to York Beach area	2.0	1981
2. Replace 6-inch line on South Side Rd.	.29	1982-85
3. Replace 6-inch line on U.S. Route 1	.43	1982-85
4. New main on Route 1, Old Post Rd. to Newtown Rd.	.32	1982-85
5. Connect South Side Rd. to Route 1	.25	1982-85



■ Route 103 bridge with water pipe that was newly insulated in 1990.

6. New water treatment plant	2-4.0	1985-90
7. Clean and line 12-inch pipe on Route 1, part of Ocean Ave. and Long Beach	.18	1985-90
8. Clean and line remainder of Long Beach and Freeman St.	.16	1985-90
9. New pipe in Bay Haven Ave.	.68	1990-95
10. Connect Field Ave. to Camden Ave.	.04	1990-95
11. Replace pipe on Church St. and Railroad Ave.	.12	1990-95
12. Replace and rehabilitate old pipe	3.3	1995-2000

On August 11, 1986 the Trustees voted to proceed with repairs to the Chase's Pond dam. Based on a project analysis and recommendations prepared by Wright-Pierce Engineers, the project was put out to bid, and the work was begun.

On November 12, 1987 the Trustees voted to construct the water treatment plant, replace the water main on Route 1, and replace the main over the Passaconaway bridge, based on a water treatment feasibility study conducted by Wright-Pierce Engineers. On June 6, 1988 they voted to accept the \$4,039,100 bid of the Charwell Construction Company to construct the new treatment plant.

On December 5, 1988, the Trustees voted to accept the negotiated price of \$299,117 submitted by R. M. Roland Inc. for expanding the office building on Woodbridge Road.

The master plan was being implemented in a systematic manner to insure that the capacity and quality of the York water system would grow with the community and that domestic users, who consume most of the water, would have drinking water that met or exceeded most quality standards.

THE WATER TREATMENT PLANT

The 1986 Amendments to the Safe Drinking Water Act of Maine included a new Surface Water Treatment Rule, which became effective in 1989. The new rule required disinfection and filtration to protect surface water supplies from contamination by microorganisms. Both disinfection and filtration were effective technologies for eliminating or reducing those organisms that were responsible for waterborne disease outbreaks. The new rules applied to all public water systems using a surface water supply.

The cost of designing, constructing, maintaining, and operating a filtration facility was relatively high when compared to the operation of an unfiltered system. Many communities sought to avoid filtration by developing a groundwater source, purchasing water from other communities, or by obtaining a filtration exemption.

The York Trustees had the engineers study a possible merger with the Kittery Water District only to find that such a merger would not be cost effective. It was the responsibility of the York Water District to provide water for consumption that was hygienically safe and aesthetically acceptable. Suggested limits for aesthetic contaminants, including color, iron, and manganese, were frequently



■ Constructing the foundation of the clearwell, a holding basin for treated water at the site of the new treatment plant.



■ Left to right: Gary Stevens, Assistant Plant Operator, and Don Neumann, Foreman, operating the sluice gate.

exceeded. Taste and odor problems were documented in an earlier report from user questionnaires on which 60% of the customers who responded felt that the water was of fair or poor quality.

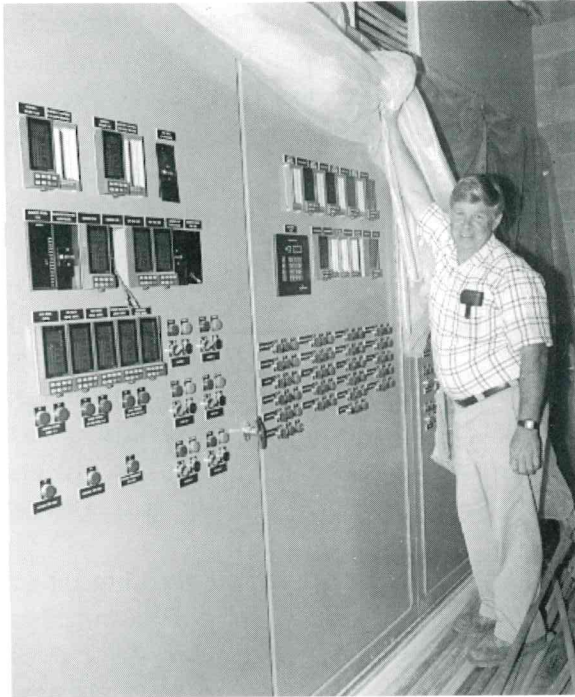
Based on these considerations, the engineers recommended that a plant should be designed to remove turbidity, color, tastes and odors, iron, and manganese. In addition algae, living and dead, would be removed. Corrosion control measures would also be provided. Wright-Pierce recommended the installation of a rapid-rate "packaged" water treatment system because of the minimal space requirements and low cost when compared with the more conventional slow sand filtration systems, which were attractive because of their simplicity of operation. For the York Water District the engineers designed a 4-million-gallon-per-day rapid-rate packaged water system. The York plant was to go on line in May of 1990.

The treatment scheme of the plant included specific unit operations consisting of: coagulation (a process that reduces the repelling forces between particles, allowing them to attach and form larger particles); flocculation (the joining together of the coagulated particles); filtration (the passing of water through a filter medium to remove the suspended material); pH adjustment (adding caustic soda to increase the pH level to about 6.0); and disinfection (adding chlorine to destroy or inactivate pathogenic microorganisms).

The treatment plant was designed for a maximum daily flow of four-million gallons per day. Two parallel treatment systems of two-million gallons per day capacity each, provided opportunities for maintenance without shutting down the entire system. Flow through the treatment systems could be controlled automatically (by the level of water in the clearwell) or manually if necessary. The clearwell was used to store 243,000 gallons of water and provide time for the chlorine to disinfect the treated water. "Finished water" pumps withdrew water from the clearwell and pumped it into the distribution system.

During normal operation, backwash and rinse water would be diverted to one of the lagoons where the solids settled into the bottom of the lagoon. Washwater from rinsing clarifiers and backwashing filters flowed to the lagoons and then into the washwater return pump station, from where it was returned to the plant. Washwater return flow entered the raw water main upstream of the building. Flow could be diverted into the other lagoon when the sludge blanket reached a certain thickness. Sludge would be removed from the lagoons to a tank truck or to drying beds. Sludge could be air dried during the summer or frozen during the winter. Freezing of the sludge destroys its gelatinous structure and dramatically reduces its volume.

All of the chemical feeding systems were automatically paced at

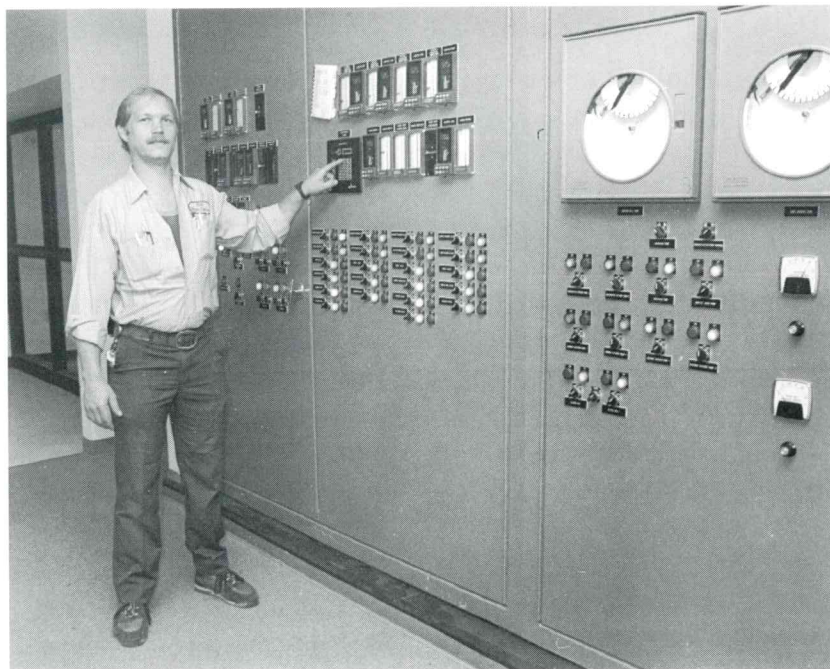


■ Norm Stevens, clerk of the works during plant construction, uncovering the new control console.

a rate which was proportional to water flow. However, dosage control was necessary, primarily because water quality varies. Normal operation of the facility was in the automatic mode, with the system adjusting chemical feed rates, flow rates, and initiating backwash sequences based on system operating conditions. Normally, flows through the treatment system would automatically respond to finish water rates set by the operator. The flow rate should be adequate to meet the demand over a 16-to 18-hour period.

The laboratory facility was designed to provide for a full range of laboratory analyses. Ports located in the pump room and laboratory allowed sampling from the raw water and the combined raw water and washwater return mains. The sample port in the pump room allowed finished water to be sampled from the turbidity feed lines.

The operators could test for color, which results from contact of the water with organic debris such as pine needles, leaves, wood, peat, and other materials in various stages of decomposition. The removal of natural color is usually accomplished by coagulation



■ Mike Moulton, Chief Treatment Supervisor, at the control console.



■ A pilot plant was set up in a trailer while the new plant was under construction.

and filtration. They could test for turbidity, which is caused by suspended matter such as clay, silt, or organic matter. Turbid waters resist disinfection because pathogenic organisms are often protected by clinging to the suspended particles. Turbidity is also removed by coagulation and filtration.

Alkalinity and acidity were determined by measuring the pH or degree of acidity on a scale of 0 to 14, with 7.0 representing neutral conditions. Several water quality parameters are affected by pH, including solubility, corrosivity, the performance of the treatment process, and the required dosage of treatment chemicals.

Iron measurements could be conducted. Iron in drinking water is not harmful to humans; however, the aesthetic quality of water can be jeopardized if large amounts of iron are present. Iron can also cause staining of porcelain fixtures and clothing. Manganese presents the same water quality problems as does iron.

The new plant was designed to test for these water qualities and provide processes for complete treatment. Primary systems were designed to remove turbidity, microorganisms, tastes, and odors. Color, iron, and manganese



■ In the pilot plant, treatment processes were simulated to insure that the water was receiving appropriate processing.

removal could be accomplished on an as-needed basis. There were facilities for carbon absorption and pH control.

The process of water treatment began through the existing raw water intake and screens. Raw water flowed by gravity to a metering and flow control station in the plant. The first treatment chamber was a carbon contact chamber where powdered activated carbon would be applied to the raw water to remove tastes and odors and to achieve some color reduction. Capability to apply an oxidizing agent and disinfectant was also provided.

Coagulation was accomplished in two rapid mix chambers arranged in series where coagulants were mixed into the flow stream using mechanical mixers. An oxidizing agent could be added and the pH adjusted. Coagulated particles formed settleable-sized particles in flocculation basins.

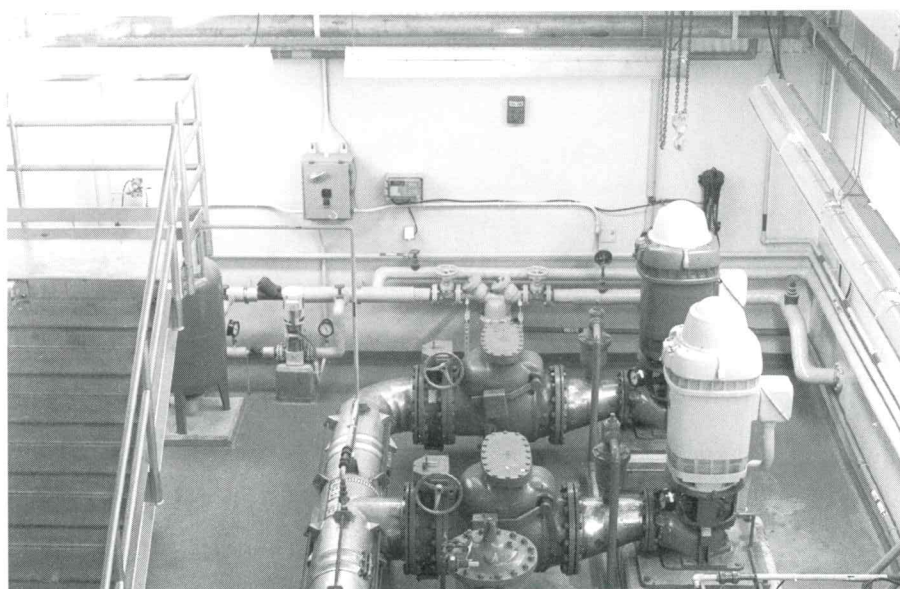
Settling of the particles occurred in two parallel sedimentation basins. Settled solids were periodically removed and transported to storage lagoons. Filtration was accomplished in two parallel gravity filters. The filtered water was then disinfected and transferred to storage. A pH adjustment could be applied prior to discharge into the transmission and distribution system.

The Trustees of the York Water District voted to name the new plant after Josiah Chase, the founder of the York Shore Water Company and the man who had the foresight to preserve the pond and its watershed to provide a reliable water supply for the residents of York.

The York Water District plant went on line, as scheduled, in May of 1990.



■ *The Josiah Chase Water Treatment Plant.*



■ *Two 100 h.p. vertical turbine main pumps. They are used one at a time with the second pump on standby.*

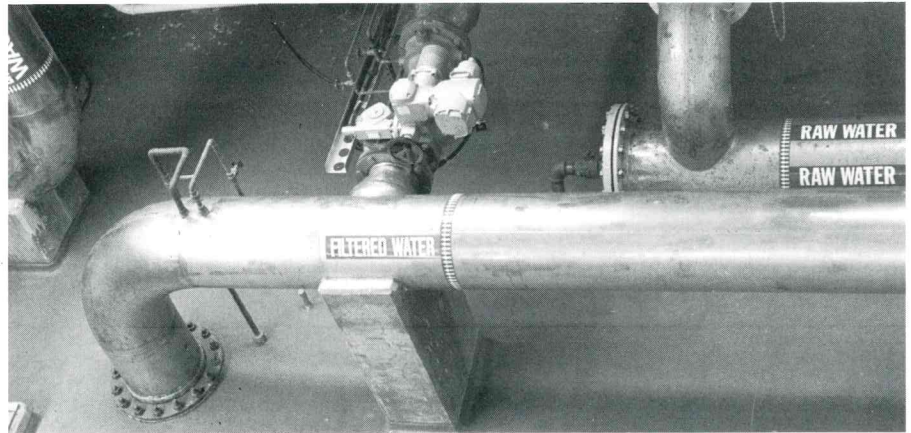
Epilogue

THE OPENING OF THE JOSIAH CHASE WATER TREATMENT Plant was a major accomplishment of Superintendent David Michniewicz and the Board of Trustees of the York Water District. It was the major step in implementing the master plan, but there was still work to be done. Many of the remaining recommendations involved replacing old pipe and laying new lines. However, the Trustees provided Michniewicz with a capital budget that enabled him to proceed with the work on a regular basis. During each construction season the work goes on and the master plan comes closer to completion.

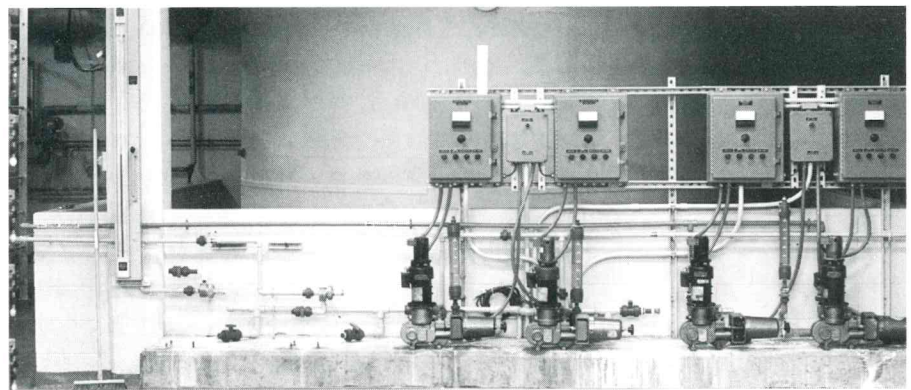
The Trustees are also responsible for managing the business of the Water District, which continues to grow as the community grows. In 1992 they voted to purchase a Gemini computer system that manages customer records, maintains financial records, does the billing, and provides much of the information upon which management decisions are based. It is a modern system designed to conduct the business of a water company.

Automatic metering systems have become available to replace meter reading books. These devices are capable of containing all of the information held in the old reading book, and they interface with the computer to facilitate the electronic handling of the meter data. Software packages make it possible to utilize personal computers, permitting them to interface with the host computer. The system uses a hand-held gun with a plug-in receptacle to eliminate the need to punch in the reading and verify the account number. The system offers the obvious advantage of faster and error free data entry. Cash flow is accelerated by reducing the read-to-bill time, reducing labor costs by eliminating the need for date entry from meter books, and reducing the costs of meter re-reads. Once this system is installed at all metered locations, it will completely automate the reading and billing process.

In 1896 Josiah Chase and the Incorporators sought to acquire the property that constituted the shoreline of Chase's Pond. In 1995 Superintendent David Michniewicz and the Trustees obtained the rights to a fifty-foot strip of shoreline on the old Jenness farm that was the last piece of shoreline not controlled by

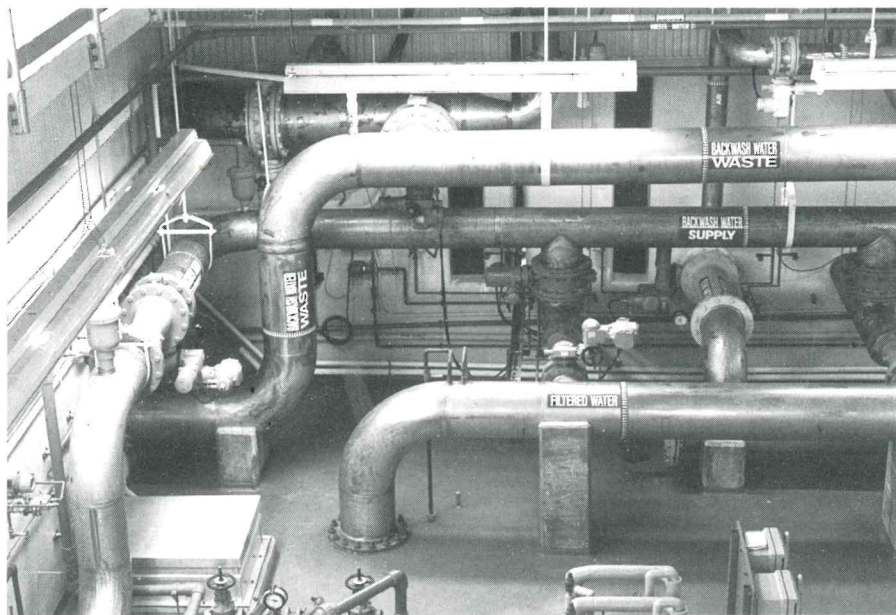


■ *Stainless steel pipe from the filters that discharges treated water into the 300,000 gallon concrete storage area beneath the pump room floor, two stories below the ground.*

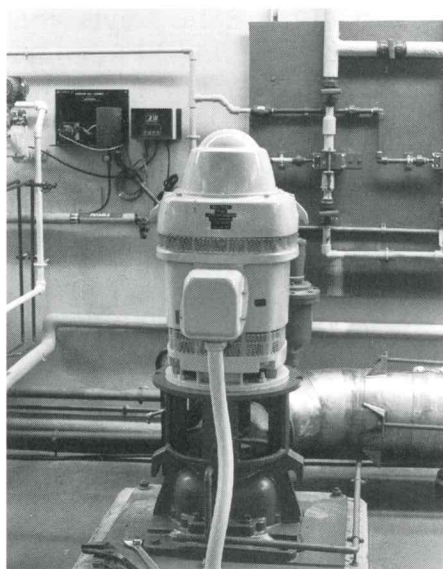


■ *Chemical storage tanks, chemical feed pumps, and electronic control panels.*

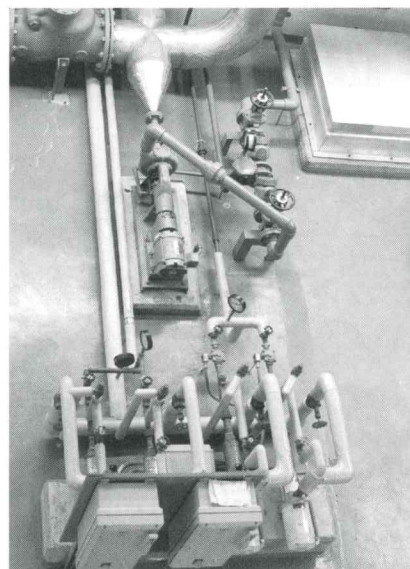
the Water District. It took one hundred years to complete the project, but the methodical acquisition of property on the pond finally resulted in total control of the perimeter. It was a critical step in protecting the precious water supply that is so vulnerable to contamination.



■ *Stainless steel process piping.*



■ *A single 50 h.p. backwash pump in the pump room of the new treatment plant.*



■ *Chlorine and ammonia vacuum booster pumps in the treatment plant are at the bottom of the picture. The pump in the center is used to agitate the top of the filters prior to backwashing.*

Acknowledgments

My appreciation for the enthusiastic cooperation of the employees of the York Water District cannot be expressed in words. They are obviously very proud of their organization and anxious for residents to know what is being accomplished. David Michniewicz and Carla Robinson were particularly supportive as I snooped through dusty files seeking to unravel the early history of the water system. Mike Moulton and Gary Stevens patiently walked me through the plant operation and dug out many of the photographs that I needed.

Virginia Spiller, an admirer of Josiah Chase, shared her personal research with me and helped me locate records of the York Shore Water Company. Roger Putnam, who is always interested in York history, helped me identify and interpret the legal cases which seemed to abound in the early years.

Photographs were loaned by Peter Moore, a long-time supporter of my projects on York history, Flora Woodford, who grew up at the Pond, Calvin Leeman, Doris Lucas, Robert Donnell and Regina, Nancy Chase, Wesley Austin, Ruth Freeman, and Susan Christmas. I also drew upon the Wagner collection and the Angevine Gowen collection.

The resources of the Old York Historical Society, the York Weekly, and the Portsmouth Public Library provided pieces of the puzzle and helped me put it all together. I appreciate the enthusiastic cooperation of the staff members who assisted me. The files accumulated for this project will be turned over to the Historical Society so that future researchers will benefit from the research that has been done by all of the people mentioned above.

John D. Bardwell
January, 1996

Appendix

ORIGINAL BY-LAWS OF THE YORK WATER DISTRICT

Article I. Meetings

SECTION 1. The Annual Meeting of the Board of Trustees shall be held at the office of the District, in the Town of York, at two o'clock in the afternoon, on the second Monday of May in each year.

SECTION 2. Regular meetings of the Board shall be held at two o'clock in the afternoon on the second Monday of each month at the office of the District in said York. No notice of the annual or regular meetings need be given.

SECTION 3. Special meetings of the Board may be called and held whenever the President deems such meetings necessary, or such meetings may be called by any two members of the Board.

SECTION 4. Reasonable notice of all special meetings of the Board shall be given to the members thereof, and such notice may be given in person or by mail, telephone, or telegraph. In the event of a special meeting being called during the absence from home of any member of the Board, twenty-four hours written notice of such meeting and of the business to be transacted shall be given by depositing such notice in the post office at York Village, Maine, postage prepaid, addressed to the absent member at his place of business, and an affidavit of the mailing made by the person of the mailing of such notice with a copy of the notice attached made by the person depositing the same at the post office shall be sufficient proof of a compliance with this bylaw.

SECTION 5. Any meeting at which all of the members of the Board are present, or to which those not present shall sign their assent in writing, shall be legal, although no prior notice thereof has been given.

Article II. Election of Officers

SECTION 1. At the Annual Meeting there shall be elected by bal-

lot, a President, Treasurer, Clerk and such other officers as may be deemed expedient.

SECTION 2. If for any reason any of the aforesaid officers are not elected at the Annual Meeting of the Board they may be elected at any subsequent meeting thereof. All of said officers shall hold their respective offices during the pleasure of the Board and until a successor is elected and qualified, provided, however, the term of the office of the President shall in no case extend beyond his term of office as Trustee.

Article III. Duties of the President

SECTION 1. The President shall preside at all meetings of the Trustees.

SECTION 2. The President shall call special meetings of the Trustees whenever he deems the same necessary, and shall give or cause to be given the notice of such meetings required by the By-Laws.

Article IV. Treasurer

SECTION 1. The Treasurer shall under the direction of the Trustees be the general financial agent of the corporation. If requested to do so, he shall give a bond to the corporation in such sum as the Trustees may direct, conditioned for the faithful discharge of his duties. The cost of such bond shall be paid by the District.

SECTION 2. The Treasurer is authorized to sign for or in behalf of the District all contracts, bonds and other written instruments and agreements which the District may at any time make with corporations or individuals for the supply of water.

SECTION 3. All moneys of the District from whatever source received shall be deposited in such bank or trust company as the Trustees may from time to time by vote determine, and none of the indebtedness or obligations of the District shall be paid except upon check, and all checks drawn upon said deposits shall be signed by the Treasurer and countersigned by one of the Trustees, and such checks shall be so arranged as to express upon their face or in a voucher attached thereto the object and purpose for which they are drawn and that the same are not valid unless so countersigned, and no check shall be drawn from an account exceeding Three Hundred Dollars (\$300.00) except on special vote of the Trustees authorizing same.

Article V. Clerk

SECTION 1. The Clerk shall keep a record of all the meetings of the Board of Trustees and perform such other duties as may be required by the Board, by the Act of Incorporation, and the laws of the State of Maine. He shall record the names of all Trustees present at all meetings of the Board.

Article VI. Superintendent

SECTION 1. The Board of Trustees may in their discretion appoint a superintendent who under their direction shall have general supervision and control of the physical properties of the District.

SECTION 2. He shall from time to time as requested file reports of the work being carried on, and such details thereof as the Trustees may deem necessary.

SECTION 3. Except in emergencies, matters requiring an expenditure of One Hundred Dollars (\$100,00) or more shall be reported by the Superintendent to the Trustees for their approval before taking action thereon.

Article VII. Salaries and Compensation

SECTION 1. Salary and compensation of officers and employees of the District other than the Trustees shall be fixed by the Trustees.

Article VIII. Quorum

SECTION 1. At all meetings of the Board three Trustees shall constitute a quorum for the transaction of business, and all matters requiring the action of the Board shall be determined by a majority vote of those present and voting thereon.

Article IX. Fiscal Year

SECTION 1. The fiscal year of the York Water District shall begin on the first day of January and end on the last day of December in each year.

Article X. Suspension, Alteration and Amendments

SECTION 1. These By-Laws may be suspended, altered or amended at any meeting of the Trustees, at which all the members of the Board are present, by a unanimous vote, or at any meeting provided notice in the call for each meeting contains notice of the proposed suspension, alteration or amendment, and that at least three members of the Board vote in favor thereof.

December 4, 1930

**YORK WATER DISTRICT
REVISED BYLAWS**

Article I General

SECTION 1. The District and its principal office shall be located in York, Maine.

Article II Meetings

SECTION 1. Annual meetings of the Board of Trustees shall be held at such time of day and place as may be fixed by the trustees or in the absence of action by the trustees, as may be fixed by the President, and shall be held on the second Monday of March in each year, if not a legal holiday, and if a legal holiday, then on the next secular day following that is not a legal holiday. If an annual meeting has not been called and held within six (6) months after the time designated for it, any trustee may call it.

SECTION 2. Regular meetings of the Board of Trustees shall be held in York, Maine, upon such notice and at such time as shall from time to time be determined by the Board of Trustees.

SECTION 3. Special meetings of the Board of Trustees may be called for by the President or any two (2) Trustees, or by the Clerk upon written request of the President or any two (2) Trustees, by giving notice of the time and place of such meeting, in the manner provided by these Bylaws for giving notice of Trustees meetings.

SECTION 4. Notice of all meetings of the Board of Trustees, other than regular meetings, shall be sent by the Clerk, Superintendent, or other person authorized to give the same by these Bylaws, to each Trustee. Notice of meetings of the Trustees shall be given in ample time to allow public attendance, pursuant to 1 M.R.S.A. 406, or any successor provision thereto.

SECTION 5. At any meeting of the Board of Trustees, a majority of the Trustees shall constitute a quorum for the transaction of business, but a lesser number may adjourn any meeting from time to time and the meeting may be held as adjourned without any further notice. When a quorum is present, a majority of the Trustees present at such meeting shall decide any question brought before such meeting, unless otherwise provided by law or by these Bylaws.

SECTION 6. Whenever, under the provisions of law, the District Charter, or these Bylaws, notice is required to be given to any Trustee, such notice must be given in writing, by personal deliv-

ery, by mail or telegram addressed to such Trustee at his address as it appears in the records of the District, with postage or other delivery fees thereon paid. Notice by mail shall be deemed to be given at the time it is deposited in the United States mail.

Article III Committees

SECTION 1. The Board of Trustees, by a resolution adopted by a majority of the directors then in office, may designate from among its members an Executive committee and other committees, each consisting of two (2) or more Trustees, and may delegate to such committee or committees all the authority of the Board of Trustees, or any portion of said authority, to the extent permitted by law. The Superintendent may also serve on any committee of the Board except the Executive committee.

Article IV Officers

SECTION 1. The officers of the Board of Trustees shall be a President, a Treasurer, a Clerk, and such additional officers as the Trustees may deem expedient, who shall be elected at the annual meeting of the Board of Trustees and shall hold office for one year and until their successors are elected and qualified, unless their term is sooner terminated as hereinafter provided. The Trustees, in their discretion, may appoint additional officers of the Board and prescribe their duties. Any vacancy occurring in any office of the District shall be filled by the Trustees.

SECTION 2. The Board of Trustees shall appoint a Superintendent who under their direction shall have general supervision and control of the District. The Superintendent shall hold office during the pleasure of the Trustees.

SECTION 3. Other employees of the District shall be appointed by the Superintendent, provided that the positions shall have first been approved by the Board of Trustees.

SECTION 4. All employees of the District, other than the Superintendent, shall hold their employment during the pleasure of the Superintendent.

Article V President

SECTION 1. The President shall preside at all meetings of the Trustees, shall see that all orders and resolutions of the Board of Trustees are carried into effect, and shall perform whatever duties the Board of Trustees may from time to time prescribe. He shall execute bonds, deeds and other contracts requiring a seal, under the seal of the District, except where required and permitted by

law to be otherwise signed and executed and except where the signing and execution thereof shall be expressly delegated by the Board of Trustees to some other officer or agent of the District.

Article VI Clerk

SECTION 1. The Clerk shall be present at all meetings of the Board of Trustees and shall keep an accurate record of the proceedings of such meetings in books provided for the purpose, which books shall be open at all reasonable times to the inspection of any Trustee, and shall perform such other duties and have such other powers as shall be prescribed by the Board of Trustees, and by these Bylaws or by law. In the absence of the Clerk at any meeting, a Clerk pro tem may be chosen, who shall record the proceedings of such meeting in aforesaid books.

Article VII Treasurer

SECTION 1. The Treasurer shall have the custody of the funds and securities of the District. He shall sign all contracts, deeds, bonds and obligations of the District, as approved by the Trustees. The Treasurer shall keep or caused to be kept accurate books of account, which shall be open at all times to any trustee. If requested by the Board of Trustees, the Treasurer shall be bonded for the faithful discharge of his duties in a sum, and with such surities, as the Trustees shall from time to time require. The cost of such bond shall be borne by the District.

Article VIII Superintendent

SECTION 1. The Superintendent shall be the administrative head of all activities of the District under the policy guidance of the Board of Trustees, and shall have such other powers and duties as the Trustees from time to time shall prescribe. He shall keep the Board of Trustees fully informed at all times as to the status of District activities. He shall have such other powers and duties as these Bylaws or the Trustees from time to time shall prescribe.

Article IX Compensation of Trustees

SECTION 1. The Trustees shall be compensated for reasonable expenses occurred in connection with District business pursuant to the limitations set forth in Section 9 of the Charter of the District, as may be amended from time to time. Any increase in compensation of the Trustees shall be made pursuant to 35-M.R.S.A. (6303(4) and any successor provision thereto.

Article X Salaries

SECTION 1. The Board of Trustees shall fix and alter the compensation and salaries of the Superintendent and the Superintendent

shall fix and alter the compensation of the employees of the District, within the guidelines approved by the Trustees.

Article XI Fiscal Year

SECTION 1. The fiscal year of the District shall end on the last day of December in each year unless otherwise fixed by resolution by the Board of Trustees.

Article XII Nomination and Election of Trustees

SECTION 1. The nomination and election of Trustees shall be made pursuant to the procedure contained in Section 9 of the Charter of the District, as may be amended from time to time.

Article XIII Indemnification

SECTION 1. The District shall indemnify any person who is or was a Trustee, officer, employee, or agent of the District, or who is or was serving in another capacity at the request of the District, to the extent authorized by law, and may purchase and maintain liability insurance on behalf of such persons or to protect itself against liability for such indemnification to the extent authorized by law.

Article XIV Amendments

SECTION 1. These Bylaws may be amended or repealed or new Bylaws adopted at any meeting of the Board of Trustees by vote of a majority of Trustees, provided that notice of such meeting included the proposed action.

March 10, 1989

TRUSTEES OF THE YORK WATER DISTRICT 1929-1996

1929-32	Charles C. Goodrich
1929-34	Charles H. Todd
1929-62	George A. Chase
1929-33	Joseph W. Simpson
1929-34	Lester M. Bragdon
1932-35	Cato R. Philbrick
1933-69	Roger K. Lucas
1934-40,1959-62	Roy W. Sturtevant
1934-40	Harry F. Hutchins
1935-50	Samuel Junkins
1940-46	Arthur W. Norton
1940-43	Henry Fuller
1943-54	Gilman Moulton
1946-72	Russell Perkins
1950-76	Elmer R. Young
1954-59	Clarence Gile
1962-67	Charles E. Weare
1962-70	Norman E. Gregory
1967-77	William G. Foster
1969-77	Frank E. Hancock
1970-77	James D. Hanson
1972-84	Philip D. d'Entremont
1976-	Robert P. Hodgins
1977-81	John D. Bardwell
1977-83	Thurston C. Briley
1977-80	Raymond Abbott
1980-95	Dexter Spiller
1981-87	Dennis Brown
1983-88	Roger Langille
1983-86	Henry J. Ruch
1986-	Richard D. Lavery
1987-93	Verdi Leighton
1988-	Andrew Belliveau
1993-	Steven A. Young
1995-	Frederick Ricker

OFFICERS OF THE YORK WATER DISTRICT 1929-1996

Presidents

1929-32	Charles C. Goodrich
1932-33	Joseph W. Simpson
1933-34	Charles R. Todd
1934-62	George A. Chase
1962-69	Roger K. Lucas
1969-76	Elmer R. Young
1976-84	Philip D. d'Entremont
1984-93	Dexter Spiller
1993-	Andrew Belliveau

Treasurers

1929-33	Lester M. Bragdon
1933-35	Cato R. Philbrick
1935-40	Roy W. Sturtevant
1940-50	Samuel Junkins
1950-72	Russell Perkins
1972-77	Frank E. Hancock
1977-88	Robert P. Hodgins
1988-93	Richard D. Lavery
1993-95	Dexter Spiller
1995-	Richard D. Lavery

Clerks

1929-34	Lester M. Bragdon
1934-62	Roger K. Lucas
1962-65	Elmer R. Young
1965-67	Charles E. Weare
1967-69	Norman E. Gregory
1969-73	William G. Foster
1973-76	Philip D. d'Entremont
1976-77	Robert P. Hodgins
1977-81	John D. Bardwell
1981-84	Dexter Spiller
1984-87	Roger Langille
1987-93	Verdi Leighton
1993-95	Steven A. Young
1995-	Frederick Ricker

Superintendents

1930-42, 1945-70	James H. Lucas
1942-44	Richard P. Barstow
1944-45	Charles H. Tucker
1970-76	Robert O. Donnell
1976-	David C. Michniewicz

Note: Jasper W. Everett was the manager of the York Shore Water Company when it was taken over by the York Water District.

Bibliography

- Army Corps of Engineers. *Chase's Pond Dam*. ME, 00188, Phase I Inspection Report. National Dam Inspection Program, New England Division, Corps of Engineers. Waltham, MA., April 1980.
- Banks, Charles Edward. *History of York, Maine*. 2 vols. Baltimore: Regional Publishing Co., 1967. Reprint of 1931, 1935 editions.
- Bardwell, John D. *Ogunquit By-The-Sea*. Bath, England: Alan Sutton Publisher, 1994.
- Bardwell, John D. *Old York*. Bath, England: Alan Sutton Publisher, 1994.
- Bardwell, John D. and Peter A. Moore. *A History of the York Beach Fire Department: 1890-1990*. Portsmouth, NH: York Beach Fire Department, 1990.
- Bardwell, John D. *A History of York Harbor and the York Harbor Reading Room*. York, ME: Old York Historical Society, 1993.
- Ernst, George. *New England Miniature*. Freeport, ME: Bond Wheelwright Company, 1961.
- Farrington, J. A. *Letter addressed to the Chairman of the Committee on Legal Affairs*. Portsmouth, NH, January 28, 1889.
- Frank, Bernard. "The Story of Water as the Story of Man." *Yearbook of Agriculture*. Washington: U.S. Government Printing Office, 1955.
- Gough, C. N. *Souvenir of Old York*. York, ME. nd.
- Kleinschmidt & Dutting. *Report on Water Works Improvements, York Water District, York, ME*. Pittsfield, Maine: Kleinschmidt & Dutting Engineers, September 1976.
- Knowlton, Roger. "EMRS—Electronic Meter Reading System." *Maine Water Utilities Association Journal*, January 1987.
- Lowe, Ralph F. *Memories of York, Maine, Eighty Years Ago and Later*. Coconut Grove FL: Field Research Projects, 1982.
- Maine Reports. *Bowden v. York Shore Water Company*. 114 Maine 150. 1915.
- Maine Reports. *Mosely v. York Shore Water Company*. 94 Maine 83. 1900.
- Maine Reports. *Sidelinker v. York Shore Water Company*. 117 Maine 128. 1918.

- Maine Reports. *York Shore Water Company v. Card*. 116 Maine 483. 1917.
- Metcalf & Eddy. *Chase's Pond Dam*. Boston: Metcalf & Eddy Engineers, June 1930.
- Metcalf & Eddy. *Report to the York Shore Water Company Upon the Fair Value of Its Property As Of October 1, 1929*. Boston: Metcalf & Eddy Engineers, 1930.
- Moody, Edward C. *Handbook History of the Town of York*. Augusta, ME: Kennebec Journal Company, 1914.
- PUR Reports. *RE York Shore Water Company*. Augusta, M: Maine Public Utilities Commission, 1916.
- Sanborn Map Company. *Fire Protection Maps*. 11 Broadway, New York, NY.: 1906, 1913, 1923.
- Sanborn-Perris Map Company, Limited. *Fire Protection Maps*. 117 & 119 Broadway, New York, NY: 1896, 1901.
- State of Maine. *An Act to Amend Chapter One Hundred and Ninety-five*. Augusta, ME: 1911.
- State of Maine. *An Act to Authorize the York Shore Water Company to Acquire and Own Certain Securities*. Augusta, ME: 1917.
- State of Maine. *An Act to Create York Water District*. Augusta, ME: 1929.
- State of Maine. *An Act to Incorporate the Agamenticus Water Company*. Augusta, ME: 1889.
- State of Maine. *York Water District vs. York Shore Water Company, et. als*. Final Decree. Portland, ME.: 1930.
- Whibby, R. *Plan of Proposed Dam for the York Shore Water Company, York, ME*. Saco, ME: October 1906.
- Whittier, John G. *Maude Muller*. Boston. Ticknor and Fields: 1869.
- Wright-Pierce. *Engineering Plan for Water System Improvements, York Water District, York, ME*. Topsham, ME: Wright-Pierce Engineers, August 1980.
- Wright-Pierce. *Inspection Analysis and Recommendations for Chase's Pond Dam*. Topsham, ME: Wright-Pierce Engineers, 1985.
- Wright-Pierce. "Surface Water Treatment Rule Mandates Filtration for Many Communities." *Review*. Topsham, ME: Wright-Pierce Engineers, Fall 1990.
- Wright-Pierce. *Water Treatment Plant Feasibility Study for the York Water District*. Topsham, ME: Wright-Pierce Engineers, 1985.
- Wyman, Don. "Metering—1986." *Maine Water Utilities Association Journal*, January 1987.
- York Cliffs Improvement Society. *York Cliffs: Coast of Maine*. York, ME. nd.
- York Water District. *Minutes of the Meetings of the Board of Trustees*. 1929-1995.

TRUSTEES AND STAFF

1995

Trustees

Andrew Belliveau, President
Richard D. Lavery, Treasurer
Frederick Ricker, Clerk
Robert P. Hodgins
Steven A. Young

Staff

David C. Michniewicz, Superintendent
Carla G. Robinson, Financial Manager
Donald D. Neumann Jr, Foreman
Michael W. Moulton, Chief Treatment Plant
Operator
Gary Stevens, Water Quality Control Officer
Michael Avery, Asst. Treatment Plant Operator
Karen J. Connolly, Customer Relations
Julie Collins, Cost Clerk
Martha Raymond, Billing Clerk
Thomas J. Gerald, Leadman
Webster Ropke, Leadman
Warren Hilton, Laborer
Cory Hathorne, Utilityman
Jeff Hyotte, Service Person

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial matters. The text outlines various methods for organizing and storing data, including digital databases and physical filing systems.

2. The second section focuses on the role of communication in project management. It highlights the need for clear, concise, and timely communication between team members and stakeholders. The text provides guidelines for effective communication, such as using appropriate channels and formats, and encourages the use of regular meetings and reports to keep everyone informed.

3. The third part of the document addresses the challenges of resource allocation and management. It discusses how to identify and prioritize tasks, allocate resources efficiently, and monitor progress. The text suggests using tools like Gantt charts and PERT diagrams to visualize project timelines and dependencies. It also emphasizes the importance of flexibility and adaptability in response to changing circumstances.

4. The final section discusses the importance of risk management and contingency planning. It outlines steps for identifying potential risks, assessing their impact, and developing strategies to mitigate them. The text stresses the need for proactive risk management and the importance of having a contingency plan in place to handle unexpected events. It concludes by emphasizing the value of continuous learning and improvement in project management practices.