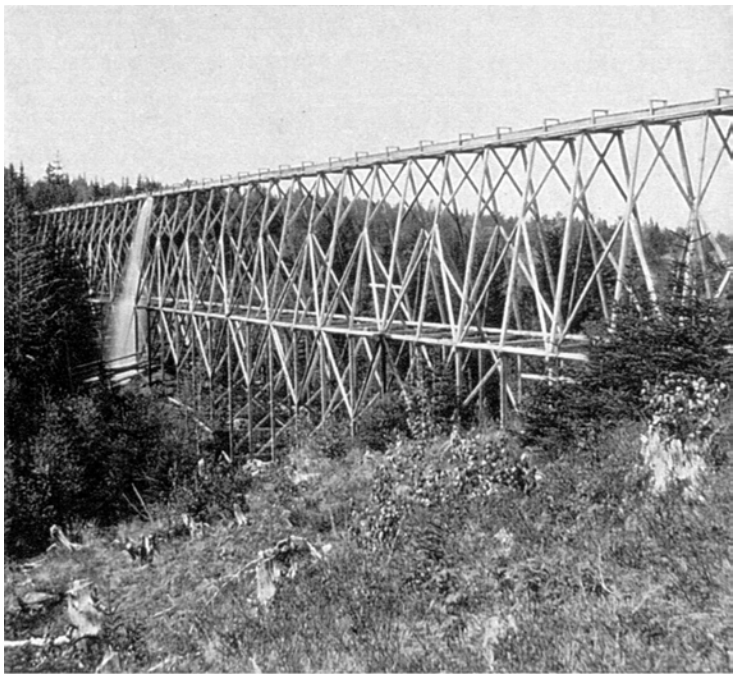
HISTORY OF THE BAR HARBOR WATER COMPANY
1873-2004



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Prepared for the National Park Service

November, 2005
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Frontispiece

ABSTRACT

In 1997, the Bar Harbor Water Company's oldest major supply pipe froze and cracked. This pipe, the iron 12" diameter Duck Brook line was originally installed in 1884. Acadia National Park owns the land over which the pipe passes, and the company's owner, the Town of Bar Harbor, wishes to hand over ownership of this pipe to the Park. Before this could occur, the Maine Department of Environmental Testing performed testing of the soil surrounding the pipe and found elevated lead levels attributable to leaching from the pipe's lead joints. The Park decided that it would not accept responsibility for the pipe until the lead problem had been corrected.

Because the pipe lies on Federally owned land, the Park requested a study to determine if the proposed lead abatement would affect any National Register of Historic Places eligible properties. Specifically, the Park wished to know if the Water System itself could qualify for such a listing. This request was made pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended. The research will also assist the Park in meeting obligations under Section 110 of the same act.

Intensive historical research detailed the development of the Bar Harbor Water Company from its inception in the wake of typhoid and scarlatina outbreaks in 1873 to the present. The water system has played a key role in the growth and success of Bar Harbor as a destination for the east coast's wealthy elite, tourists, and as a center for biological research. The history of the water company was also tightly interwoven with that of Acadia National Park. Field reconnaissance documented 24 major water company features, mainly in the Eagle Lake and Duck Brook Watershed within the boundaries of Acadia National Park. Many of these features are no longer in use, but stand testament to the early history of the water system.

It was concluded that the water system is indeed eligible for listing on the National Register of Historic Places as a Historic District under criterion A. In view of the systems's apparent significance, it is therefore recommended that minimal disturbance be made to the 12" Duck Brook line. If possible, for instance, an option to seal the lead joints and leave them in place would be preferable to removal of the joints or of removal of the pipe in its entirety.

ACKNOWLEDGMENTS

Researching the history of the Bar Harbor Water Company was possible only with the assistance of a number of people and institutions. Lee Terzis, Cultural Program Manager at Acadia National Park, provided her files on the system as well as general support. Acadia National Park's Karen Anderson provided the Global Positioning System unit used during the reconnaissance and incorporated positioning data into the Park's Geographic Information System. Chris Barter, Trail Crew Supervisor, provided personal knowledge of the historic Duck Brook Path. The staff of the Abbe Museum, and especially Curator Rebecca Cole-Will, provided logistical support and research space. Earle Shuttleworth, Director of the Maine Historic Preservation Commission, provided invaluable assistance with the Maine Historic Preservation Commissions historical photographs collection. Nancy Corliss, aqueduct Manager for the Lynam Insurance Agency, provided historical information about that company's founder, Fred C. Lynam. Research was also carried out at the Bar Harbor Historical Society, with the help of Deborah Dyer, at Jessup Library, Bar Harbor, and at the Northeast Harbor Library. Chip Reeves, Bar Harbor's Public Works Director, the Bar Harbor Water Company office manager, Brooke Carter, and Bill Harding, the Bar Harbor Water Company superintendent, assisted in finding historical documentation preserved at the Bar Harbor Water Company office. Particular thanks is owed to Bill Harding for spending considerable time explaining the system's design details and operation and sharing personal recollections. Anne Wilder, of Crane & Morrison Archaeology, was invaluable in all stages of this study; she assisted the historical research and field reconnaissance, and drafted many of the figures in this report. This project was funded by the National Park Service, Acadia National Park.

Cover: Duck Brook Aqueduct. Courtesy of the Maine Historic Preservation Commission.

Note to this Edition:
This volume covers the historical development of the Bar Harbor Water Company. It was adapted for public dissemination from a technical report entitled "History of the Bar Harbor Water Company, 1873-2004, and Cultural Resource Assessment of Water Company Facilities, Acadia National Park, Bar Harbor, Maine" submitted to Acadia National Park, and dated April 15, 2005.

This printing (January 16, 2008) reflects three minor corrections to pages 3, 83, and 85 suggested by Bill Harding.

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CHAPTER 1

INTRODUCTION

The death of 13 guests at the Bay View House had Bar Harbor's hotel owners worried. It was the fall of 1873, and news reports of the summer's typhoid outbreak threatened the village's otherwise positive reputation as a summer resort throughout the East Coast. The typhoid problem was localized to the single hotel, but visitors at a second hotel, the Rodick House, simultaneously experienced an outbreak of the less dangerous illness, scarlatina. The double outbreak was certain to create a perception that it was the village itself that was unhealthy, sending potential summer visitors elsewhere in following years. In the gloomy fall of 1873, it seemed probable that none of Bar Harbor's 15 hotels would reopen and survive the 1874 season.

A doctor on the scene believed that the well at the Bay View House was contaminated with sewage, and published his findings in a Boston medical journal. Several of the town's businessmen, David, Fountain, John, and Serenus Rodick; Stephen, Samuel, Charles, and Albert Higgins; Alfred Conners, and Edwin Des Isle, saw an opportunity to counter the threat to their businesses. Since contaminated water was identified as the problem, a solution was to pipe pristine water from outside of town to insure a safe drinking supply. Coupled with an advertising campaign to publicize the new water system in Boston, New York, and Philadelphia, a clean water supply just might allay public fears and save Bar Harbor's fledgling resort industry from impending doom.

Thus the Bar Harbor Water Company was officially born in February 1874. By the following summer, the privately owned company had built one and one half miles of open wooden flumes extending from Duck Brook to a 190,000 gallon reservoir on Scott's Hill. The

reservoir served as the intake point for approximately two miles of distribution mains. These pipes, mostly 2" and 4" in diameter, distributed the water to the downtown cottages and business in what was still a small village. For those not on a main, water could be purchased by the barrelful.

Over the next few years, the company expanded and improved the system in an effort to keep apace the village's growth. New dams and reservoirs were built to insure an uninterrupted water supply. Distribution pipes were added and the mains enlarged, supplying houses, summer cottages, and businesses, particularly hotels. In 1880, the company began to install fire hydrants on its mains in downtown Bar Harbor.

By 1893, the twentieth anniversary of the typhoid outbreak, the town's residents and visitors expected clean running water for drinking, cooking, washing, and watering their often extensive lawns and ornamental gardens. The number of hotels increased moderately, but the size of the hotels grew to mammoth proportions; the Rodicks eventually expanded their own hotel to over 600 rooms, making it the largest in Maine, if not in New England. During the same twenty years, the number of large cottages owned by part time residents expanded by a much greater degree.

In the 110 years since its founding, the Bar Harbor Water Company has continued to expand and to improve its system. New technologies were tried as they became available, only to be replaced in turn as those passed into obsolescence. Today, the water company facilities comprise one dam, 5.5 miles of 24", 16", 14" and 12" supply pipes, over 17 miles of 10" to 3" distribution pipes forming a branching network, four storage tanks ranging from 47,000 gallons to over 500,000 gallons capacity, one major and two minor pumping stations, chlorination and

fluoridation plants, an office building and a garage. More intriguing, are the scattered ruins of the visually impressive engineering works from the system's past: filter beds, a stone standpipe tower, five additional dams, three reservoirs, and a small canal, each grown over in forest. These are the concrete evidence of the decisions made by the water company managers over the past 125 years. The decisions were frequently driven by the need to keep up with growth of the village that the success of the water company itself had been so important in preserving.

Project Background

By the water system's 10th year in operation the original wooden flumes could no longer meet the growing demand for water in Bar Harbor. In 1884, the Bar Harbor Water Company abandoned the flume, replacing it with 3,200 feet of 12" iron pipe beside Duck Brook from New Mills Meadow to Eden Street. For an additional ten years, this above-ground pipe was the sole pipe supplying water to the village. Starting in 1894, still larger supply pipes were incorporated into the system. Thereafter, the 12" Duck Brook pipe was relegated to an ancillary role, in which it was only used to boost the water supply to the community during summertime.

In January 1997, this 12" supply main froze, the ice splitting open several hundred feet of pipe. The company's management decided to replace nearly 3,000 feet of the old pipe with modern welded polyethylene pipe. After 113 years of service, the iron pipe that supplanted the original flume was cut out of the system and, for the time being, abandoned in place.

Because the abandoned Duck Brook line lies entirely within Acadia National Park, the Town of Bar Harbor and the Park began discussions as to the best way to deal with the pipe in the future. One option, for instance, was to simply leave the pipe in place. With this possibility

in mind, the Maine Department of Environmental Protection (MDEP) investigated the environmental impact of lead leaching from the abandoned pipe's soldered joints, in 1998. The MDEP concluded that the pipe joints were leaching small amounts of lead into the surrounding soil and sediment. Because of the potential cumulative impact of lead from each joint, the MDEP determined that the continued release of lead to the environment must cease. Initially, the suggestions made by the MDEP for correcting the problem included physically removing the pipe in its entirety, removing the lead joints, or sealing the joints to eliminate further leaching, abrading or weathering.[1] In 2003, the Town of Bar Harbor, the current water system owner, began planning the abatement of lead leaching from the abandoned 12" pipe along Duck Brook. Currently, a range of options for addressing the lead issue remain under consideration.

Because the lead abatement project involves facilities on Federally owned land, it is subject to review under Section 106 of the National Historic Preservation Act. Acadia National Park, the principal federal agency involved in this project, in consultation with the Maine Historic Preservation Commission, determined that an assessment was needed of all historical resources that might be affected by the abatement project. To this end, an intensive historical study and field reconnaissance was undertaken. The project was carried out by Peter Morrison of Crane & Morrison Archaeology, and was administered by the Abbe Museum, Bar Harbor, under its Cooperative Agreement with Acadia National Park.

The initial question to be answered by the historical study was whether or not any historical resources affected by the lead abatement project are "Significant," applying the

[1] "Draft Meeting Minutes, Environmental Assessment for Long-Term Remedy of Abandoned Water Maine, May 12, 2003." Meeting held at Duck Brook and Acadia National Park Headquarters.

Criteria for Eligibility for the National Register of Historic Places (36 CFR 60.4 [a,b,c,& d]). For instance, is it likely that any sites dating prior to installation of the pipe might be affected? More particularly, are the Bar Harbor Water Company facilities themselves eligible for listing on the National Register of Historic Places? A tenet of this study is that the particular water main that might be affected by the proposed lead abatement cannot be assessed in isolation. Rather, the possible significance of the Bar Harbor Water Company system as a whole must be taken into consideration.

Geographical Setting

Bar Harbor lies on Frenchmans Bay on the east shore of Mount Desert Island in eastern Maine (Figure 1). Originally, the term "Bar Harbor" referred to one of several small villages within the town of Eden. The village of Bar Harbor borders Frenchmans Bay, its northeast-facing shore protected by Bar Island and the five Porcupine Islands. The village lies on a narrow plain surrounded by steep hills that rise up 2/3 mile inland (Figure 2). Eventually, the village's population grew to dominate the town, and by the late 1800s, many people called the town by the name of its largest village. Accordingly, the town's name was officially changed from Eden to Bar Harbor in 1918.

The Bar Harbor Water Company's service area is restricted principally to what was the original village of Bar Harbor, rather than the town as a whole. Over the years, the water system has also been extended northward along Route 3 to serve hotels, residences, and scientific and educational institutions as far north as Salisbury Cove.

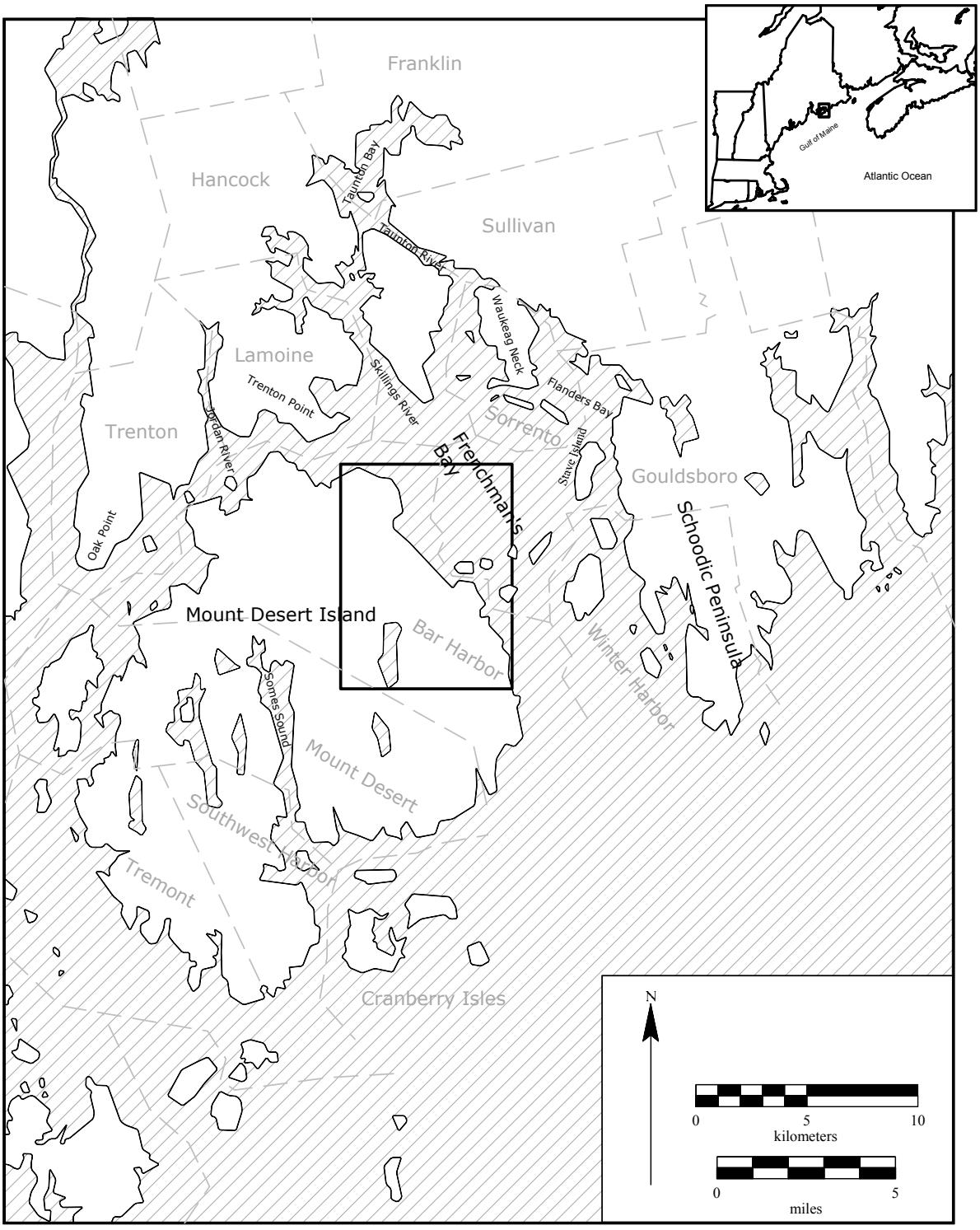

Figure 1. Location of the Bar Harbor Water Company Project Area on Mount Desert Island, Hancock County, Maine. The box indicates the coverage of topographic maps used elsewhere in this report.

Figure 2. Geographical extent of the Bar Harbor Water System. Today, the system extends over six miles north to south. The source of the systems's water is Eagle Lake. The lake is fed by numerous small streams flowing off the sourrounding slopes, including Cadillac Mountain. The lake's natural outlet is Duck Brook, which flows north two miles to Frenchmans Bay.

The Bar Harbor Water Company supplies the town with water from Eagle Lake, two miles from the center of the village and within the boundaries of Acadia National Park (Figure 2). The lake is fed by numerous streams flowing off the surrounding slopes and from Bubble Brook, that flows into the lake from Bubble Pond to the south. A dam maintained by the Water Company currently holds the lake surface at 277 feet above sea level, 2 or 3 feet higher than it would be under natural conditions. The lake's natural outlet is Duck Brook at the north end of the lake.

From Eagle Lake, Duck Brook winds across flat but rocky ground for its first half mile. The surrounding woods are young and dominated by poplars. This forest growth dates only from 1947, when a massive fire swept the northeastern third of Mount Desert Island—charred stumps from this fire can still be found in sheltered locations near the brook (Figure 3). The brook then passes through a small breached dam and flows over one half mile through the broad and open New Mills Meadow. Here, the brook widens out to form the broad and shallow upper and lower New Mills Meadow Ponds (Figure 2). These two ponds are separated by yet another low dam and a short section of connecting brook. Remnants of a third old dam at the north end of the lower pond holds the water about one or two feet above its natural level. In the course of one mile from Eagle Lake to the lower (north) end of the New Mills Meadow Ponds, the gently flowing Duck Brook descends about 65 feet.

Below New Mills Meadow, the character of Duck Brook changes abruptly. The stream enters a narrow, wooded, steep-sided gorge. From New Mills Meadow, Duck Brook drops over numerous falls, descending 210 feet in the remaining three-quarters of a mile to the ocean. A

Figure 3. Charred stumps resulting from the great Mount Desert fire of 1947 still can be found in sheltered locations on the slope of Great Hill near Duck Brook.

low unnamed hill lies on the west side of the stream gorge. Great Hill, with its long northward ridge, lies to the east. On older maps, this hill is frequently called Great Pond Hill, and its northward ridge, Paradise Hill, or more often, Sunset Hill. In Water Company documents, the north ridge has also been called Cunningham's Hill.

Methods

In evaluating the Bar Harbor Water Company, efforts were made to find plans and other documentation shedding light on the system's development. Three weeks were spent studying records at the Bar Harbor Water Company office. The company provided access to their records, including construction plans and surveys dating back as far as the 1880s, and the bound notebooks that record minutes of the company's share holders meetings, directors meetings, and committee meetings, as early as 1874. Research was also carried out at the Bar Harbor Historical Society, the Northeast Harbor Historical Society, the Hancock County Registry of Deeds, the Fogler Library at the University of Maine, Orono, the Maine Historic Preservation Commission, the Maine State Archives, and the Maine Historical Society, Portland.

In addition to historical research, the project entailed a reconnaissance of the water system, with particular attention to the major facilities lying inside Acadia National Park. The location of the system's components were mapped using a Trimble GeoExplorer III. Photographs were made of individual system components using a digital camera and using black and white film. Measurements for sketch drawings of the components were made using compass, tape, and pacing.

CHAPTER 2

BAR HARBOR AND THE DUCK BROOK WATER SHED, PREHISTORY TO 1873

The Native Wabanaki people are represented today by the Maliseet, Micmac, Passamaquoddy, and Penobscot. Native Americans are known to have occupied mid-coast Maine as early as 5,000 years ago, during the period known to archaeologists as the Middle Archaic. No sites of that age are known on Mount Desert Island. Better represented are sites of the Late Archaic, from about 3,750 years ago to 3,000 years ago, and sites of this age are known on Mount Desert Island. Most numerous of all, however, are Ceramic period sites of the last 3,000 years.[2]

Though no Native American archaeological sites have yet been recorded in the Eagle Lake and Duck Brook watershed, Native American usage of Duck Brook has been suggested in early historical times, and that usage that may well have occurred prehistorically as well. Specifically, a study of the historical trail systems of Mount Desert Island and Acadia National Park concluded a trail along Duck Brook may have been used as a portage route from Frenchmans Bay to Eagle Lake, Jordan Pond, and Jordan Pond Stream before permanent New England settlement started in about 1760.[3] While this may well be true, physical evidence of

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[2]Stephen Hornsby, Kimberly R. Sebold, Peter Morrison, David Sanger, and Alaric Faulkner, *Cultural Land Use Survey of Acadia National Park* (Prepared for the National Park Service by the University of Maine, Orono, 1999), 13-15.

[3]Margaret Coffin Brown, *Historic Hiking Trail System of Mount Desert Island (Draft).* Cultural Landscape Report for Acadia National Park, Maine. Volume 1: History, Existing Conditions & Analysis. (Olmstead Center for Landscape Preservation, Brookline, Massachusetts 2003), citing Rebecca Cole Will personal communication 1997.

such a portage route is impossible to discern on the landscape today. In the future, campsites located along the former trail could be discovered through archaeological testing.

New England Settlement and Early Development of Bar Harbor 1763-1870s

With the construction of Fort Pownal at Stockton Springs in 1759 and the close of the French and Indian War, Maine east of the Penobscot came under effective control of the Massachusetts government. Settlement of the eastern coast followed immediately, and most modern towns of coastal Hancock and Washington Counties were settled by 1769. Abraham Somes, the period's first recorded settler on Mount Desert Island, arrived in 1761. Somes' family joined him on the island by June, 1762. Thereafter, population growth was slow, but steady, over the next 100 years. By 1790, Mount Desert Island was home to fewer than 750 individuals. The Town of Eden was separated out of Mount Desert in 1796. In 1800, the population of Eden stood at 400. In 1860, the total population of Mount Desert Island was 3,900, while that of Eden was 1,200.[4]

During this first 100 years of settlement, inhabitants of Mount Desert Island supported themselves through traditional rural economic activities: mixed agriculture and animal husbandry, small scale hand manufacturing, timbering, and fishing. To these, can be added such larger scale industries as ship building and stone quarrying. For most households, piecing together a sufficiency meant engaging in a mix of economic activities through the year as conditions and opportunities permitted.

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[4]D. E. Lacadie, *United States Census Population Totals for Maine Counties and Minor Civil Divisions, 1790-1990*, (Orono, Maine: University of Maine, Fogler Library, 1994); Hornsby et.al. *Cultural Land Use Survey*, 43-45.

In many Maine towns without access to the ocean and where timber was exhausted, this form of mixed livelihood was not sufficient to maintain even a steady population through the first half of the 1800s. As a result, many towns experienced an actual decline in population beginning in the 1820s, 1830s, or 1840s. Towns of southwestern Maine that experienced continuous growth were often those where textile mills and other large scale industries were supported by access to major rivers.

The towns of Mount Desert Island, including Eden, proved a relative success in that their populations either rose, albeit slowly, or remained level throughout the nineteenth century. But there was a difference in growth patterns experienced by the towns on the western side of the island versus those on the eastern side. The towns of Southwest Harbor and Tremont on the western side of Mount Desert Island had zero population growth probably beginning by 1850 and continuing to 1930, and barely any growth as late as 1970. Eden, on the other hand, experienced slow but steady growth to 1860, with more pronounced growth thereafter.

Eden had no river suitable for large mills like those that supported population growth in Saco, Biddeford, or Westbrook, in southwestern Maine, or like Bangor in eastern Maine. However, its geography did prove uniquely suitable for supporting a new industry of its own, namely, tourism. This industry was vital in counteracting the declining economic value of the region's traditional industries.

Tourism started in a small way and grew as the area's reputation spread. Several periods have been identified based on the class of visitor that dominated.[5] Initially, Bar Harbor was visited by landscape artists. Thomas Cole came to the island in 1844 and stayed at the Lynam's

[5]Richard W. Hale, Jr., *The Story of Bar Harbor*, (New York, Ives Washburn, 1949).

house at Schooner Head. He returned within four years with friend and fellow artist, Edwin Church. Over the next twenty years, numerous other landscape painters followed these men's influential lead. Importantly, the patrons of these artists were the East Coast's wealthy elite, and sale of painted depictions of Mount Desert's rugged mountains and coast as well as the artists' verbal reports spurred interest among this fashionable set to visit the place themselves.[6]

This early wave of visitors were "rusticators;" travelers under the sway of the romantic movement of the time, willing to endure primitive travel conditions and to take shelter where they could. The households that took in such travelers were performing a courtesy, as well as taking advantage of yet one more small financial opportunity that would help them string together a livelihood. Predecessors to the village's later hotels, the farm houses where visitors hired lodging were also forerunners of modern bed-and-breakfasts, to which they share even greater similarity.

As time progressed, the arrangements become more formal and the business more specialized. Tobias Roberts, head of one of the houses frequented by travelers, opened the first actual hotel in town, the Agamont House, in 1855. A second hotel, the Deering House, was opened in 1858. At about the same time, Daniel Rodick opened two cottages to lodgers. By the late-1850s, it was not just artists that were visiting town and supporting the growing hotel industry. Scientists followed the artists, and notably, whole families, representing the newly rising "leisure class" began to arrive to take extended summer holidays.[7]

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[6]Hale, *Story of Bar Harbor*, 126-127.

[7]Hale, *Story of Bar Harbor*, 130-134.

Overall, the effects of the new business on town remained small until the end of the Civil War. The village of Bar Harbor still only comprised a few houses and three modest hotels; no additional infrastructure oriented towards summer visitors had yet appeared. This changed in 1866, when Tobias Roberts built a steamboat wharf adjacent to his Agamont House. The Eastern Railway began making regular steamship stops there and soon took over operation of the wharf.[8] The hotel business took off, and the village began to take on a new character. Many of the new hotel operators were the same individuals that had earlier taken lodgers into their homes. Daniel Rodick converted his small cottages into a hotel, John Lynam, owner of the popular farmhouse at Schooner Head, moved into town to build the Lynam House, and the Higgins family built and operated several hotels. By 1871, at least 11 hotels were operated in the village of Bar Harbor, and in 1873, 15.[9]

History of the Duck Brook Valley

Native American use of a portage trail on Duck Brook has already been noted. When the Atlantic Neptune Navigation charts of the Maine coast were surveyed just prior to the American Revolution, Duck Brook was recorded, as was one building near its outlet to Frenchmans Bay. No structures were indicated further inland. In fact, Duck Brook was only mapped as far inland as the foot of Great Hill; New Mills Meadow and Eagle Lake were not depicted at all.[10]

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[8]Hale, *Story of Bar Harbor*, 135.

[9]Hale, *Story of Bar Harbor*, 135, 142

[10]Joseph F.W. Des Barres (ed.), "Mount Desert Island and Neighboring Coast of Maine," (London, ca. 1776).

However, this omission of inland topographic features should not be considered surprising, as this was a coastal navigation chart.

In his 1794 map, John Peters depicted two mills on Duck Brook, a saw mill and a grist mill. Both mills were located near the brook's outflow into Frenchmans Bay (Figure 4). The map showed more detail inland than did the Des Barres chart, correctly showing New Mills Meadow and Eagle Lake. The 1794 Peters Map showed roads, mills, and hydrographic features, but did not depict individual homesteads.[11]

In 1807, James Peters drafted map, showing the east half of Mount Desert Island. The map was based on the 1794 map but has important differences. Among these are that the 1807 map shows lot divisions and additional topographic details. Ezra Young was shown as owning a 240 acre lot at the outlet of Duck Brook. The remainder of the Duck Brook Valley and the land at the north end of "Young's Pond," now Eagle Lake, belonged to Edward Brewer. Peters did not include structures on this version.[12]

The next available map is the *Topographic Map of Hancock County*.[13] This map depicts all of Hancock County, but its relatively wide geographic scope came at the expense of detail. It shows individual structures, usually with owners named, but only along major roads. Minor roads were frequently neglected, as were sites that might have been located along them. The

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[11]John Peters, "A Map of Mount Desert Island" (1794).

[12]James Peters, "A plan of the French grant on Mount desert the shore to the old settlers Lots copied from a Plan taken by John Peters Esq. the remainder of the survey taken by me James Peters Esq., Blue Hill, November 1807." On file, Hancock County Registry of Deeds, Ellsworth.

[13]H. F. [Henry Francis] Walling, "Topographic Map of Hancock county, Maine," (New York, Lee & Marsh, 1860).

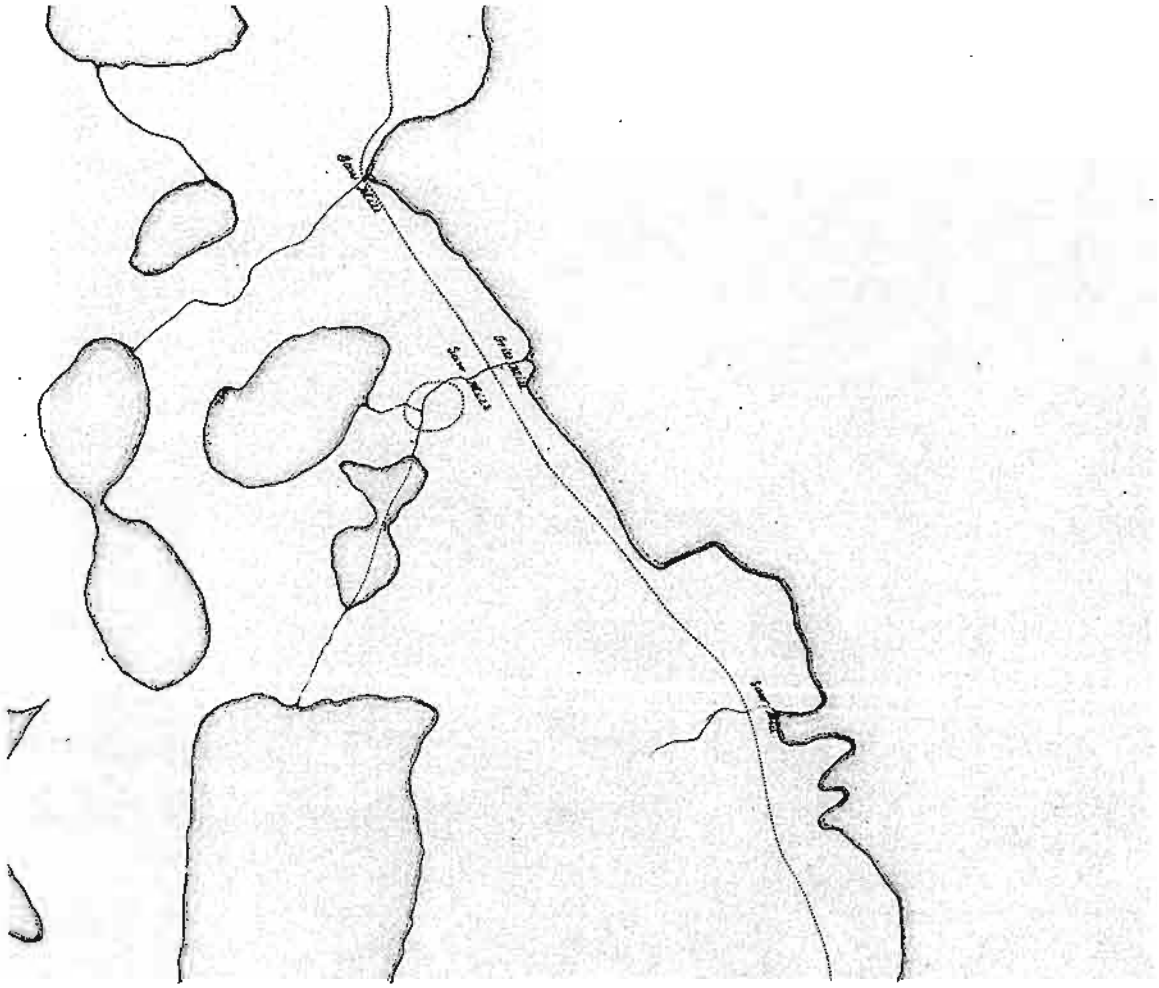

Figure 4. Excerpt of the 1794 Peters Map. From upper left to lower right, mills were recorded on Breakneck Brook at Hulls Cove, Duck Brook, and Cromwell Brook at Crowmell Harbor. The grist mill on Duck Brook was near the later site of the Hamor Saw Mill.

Walling map shows both Eagle Pond and Duck Brook, but not New Mills Meadow. The map does not show any mills along the middle section of the brook, where New Mills Meadow is, nor does it show any roads along the brook. Several buildings, including two sawmills, were shown on either side of the brook near Frenchmans Bay.

While it is not currently known who owned the mill at the outlet of Duck Brook in 1794, a new mill was built on the site in about 1843, probably by John A. Hotchkiss. This mill was purchased successively by Edward Brewer in 1848, Bethel Salisbury in 1861, and Richard Hamor in 1866. The Hamor family operated the mill until the mid 1890s. In 1896, the Hamor's closed their Duck Brook mill and moved its saw machinery to a new steam powered mill closer to town.[14] The abandoned mill on Duck Brook became a favorite subject of photographers, and it frequently appeared in postcards and stereo views (Figure 5).

As the name suggests, New Mills Meadow was also once the site of a mill. According to a hand drawn map made by A.L. Higgins, there was a mill there in 1855.[15] Whether the mill was active at that date, is not known. Higgins also noted an abandoned mill at the outlet of Eagle Lake, which he called Great Pond. He did not indicate a mill at the outlet of Duck Brook. How late the New Mills Meadow mill operated is unknown, but it must have closed prior to 1866 when the Hamor family purchased the mill at the bottom of Duck Brook. In1898 testimony

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[14]In "Notes on Hamor Mill/Bar Harbor Water Company lawsuit, January 1898: 11. On file Bar Harbor Water Company.

[15]A.L. Higgins "Pen Sketch from Memory, of East Eden, (Bar Harbor) and All the Inhabitants Receiving "Once A Week" Mail at the P.P. 1855-1865," (Bar Harbor, ca. 1865). Printed in Ruth Ann Hill *Discovering Old Bar Harbor and Acadia National Park*, (Camden, Maine, Downeast Books, 1996), 12-13.

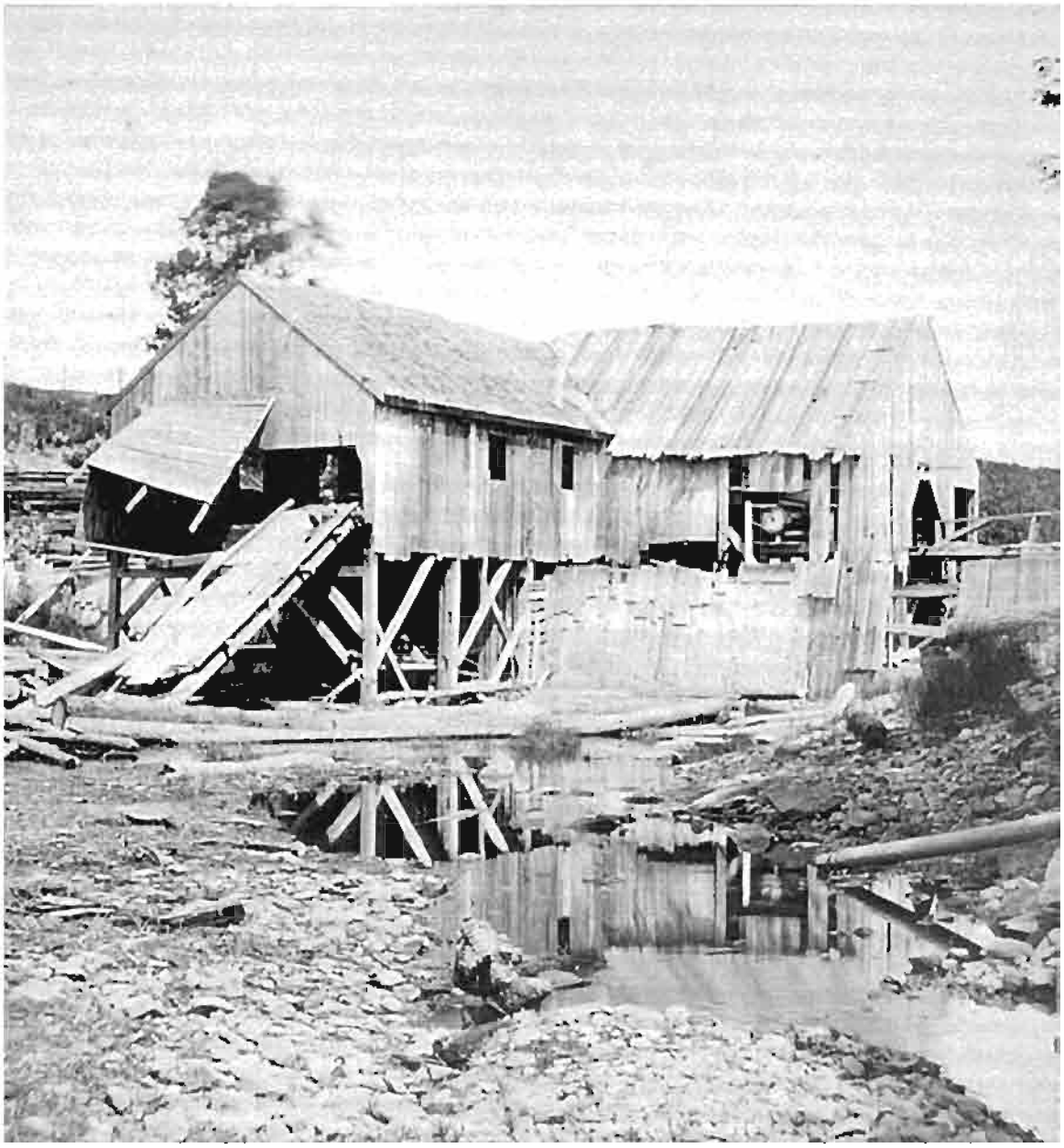

Figure 5. Hamor Saw Mill on lower Duck Brook. This picture, presumably taken after 1896, shows the mill built in 1843. An earlier gristmill may have stood on the same site as early as 1794. Bryant Bradley photograph, excerpted from a stereoscopic pair. Courtesy of the Maine Historic Preservation Commission.

concerning his family's water rights on Duck Brook, Elihu Hamor noted that there were dams at New Mills Meadow and at Eagle Lake. His family operated both dams to control flowage to its mill at the bottom of the stream. Hamor did not mention any surviving mills on the upper brook.[16]

Duck Brook Trail. In the late 1800s what may have been the former Wabanaki portage trail was incorporated into the growing network of formal walking trails across Mount Desert Island. As such, the Duck Brook Trail appeared on trail guides as early as 1874, and continued to appear at least into the 1940s. Over that time, repairs were made to it on several occasions, most notably, after it was damaged by the Bar Harbor Water Company. Improvements included first, laying of logs along the brook, and later, replacement of these logs with stone treads. The path was donated to the Hancock County Trustees of Reservations in 1923. By 1951, Acadia National Park no longer maintained the Duck Brook path in its formal trail system.[17]

The Crisis: 1873

As the summer season began in 1873, Bar Harbor was prospering (Figure 6). Construction was booming, the hotel business continued to expand, and the year-round population was growing at the fastest rate up to that time. Then, in August, typhoid struck eight

[16]In "Notes on Hamor Mill/Bar Harbor Water Company lawsuit, January 1898: 11.

[17]Summary of the Duck Brook Path's history is provided in Margaret Coffin, *Acadia National Park Hiking Trail System Data Report*, (Brookline, Massachusetts, Olmstead Center of for Landscape History, February 17, 2000). The Duck Brook Path is identified as trail 311 in that report and in the Park's trail database.

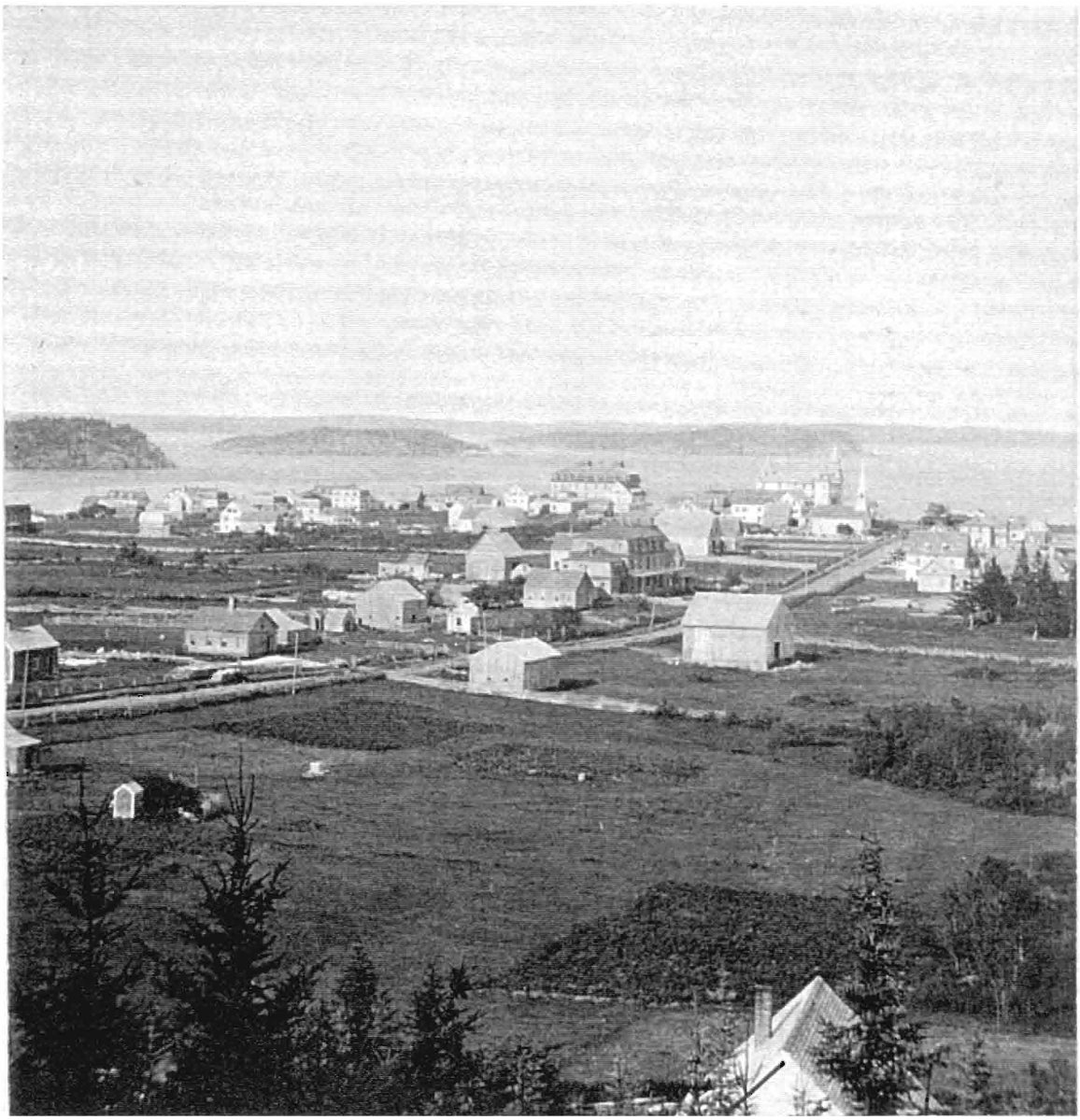

Figure 6. Bar Harbor, 1875, viewed to the east towards Bar Island and the Porcupines. The road is Mount Desert Street. Bryant Bradley photograph, excerpted from a stereoscopic pair. Courtesy of the Maine Historic Preservation Commission.

lodgers at the Bay View House (Figure 7). Over ensuing weeks, it was reported that five additional guests were diagnosed with the illness after returning home. Shortly afterwards, news spread that scarlatina, a mild form of scarlet fever, had struck guests at David Rodick's Rodick House (Figure 8). Both hotels were forced to close temporarily. Tourists fled most other hotels in town, and the outbreaks became national news. Some newspaper articles commented that without earnest local action, the name "Mount Desert" would prove a prophecy of the island's fate.[18]

Later in the year, Dr. William Morton, a Boston physician and summer visitor to Bar Harbor, published an assessment of what caused the Bay View House outbreak. According to his analysis, further outbreaks could be prevented through improvements to the kind of septic systems being used in town and through a clean water supply. In his conclusion, Doctor Morton remarked "we are glad to state that measures have already been taken which it is hoped will end in the introduction of an abundant supply of the purest water from Eagle Lake.... "[19]

The threat to Bar Harbor's hotel industry was clear. If the two outbreaks led to a perception that Bar Harbor was unhealthy, the village's hotel business was doomed. By the time Morton published his analysis, several businessmen were discussing ways to supply the village and its hotels with clean water. If they could do so, and publicize that fact, then the hotels just might reopen to a successful season in 1874. To that end, David, Fountain, John A., and Serenus

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[18]Hale, *Story of Bar Harbor*, 144-145

[19]William J. Morton, M.D. "Mount Desert and Typhoid Fever During the Summer of 1873," *Boston Medical and Surgical Journal* 89, No. 18 (1873): 421-426.

Figure 7. In August, 1873, the Bay View House was the site of a typhoid outbreak. Fears were that news of the illness would scuttle hopes for a prosperous hotel industry in years to come. Bryant Bradley Photograph, date unknown. Excerpted from a stereoscopic pair. Courtesy of the Maine Historic Preservation Commission.

Figure 8. At about the same time visitors of the Bay View House were struck by typhoid, visitors of the Rodick House were struck with scarlatina. The Rodicks had earlier operated rental cottages, and then the Rodick House. This photograph shows their hotel as it probably appeared at the time of the outbreak. Over the years, they continuously expanded their operation until, in the late 1880s, they claimed to own the largest hotel in Maine. Photographer unknown. Courtesy of the Maine Historic Preservation Commission.

H. Rodick; Stephen, Samuel N., Charles, and Albert F. Higgins; Alfred Conners, and Edwin (Ely) G. Des Isles petitioned the Maine Legislature to charter the Bar Harbor Water Company in January, 1874. The legislature moved quickly, and the "act to incorporate the Bar Harbor Water Company" was passed into law on February 10th.

The list of petitioners was dominated by members of the Rodick and Higgins families. Both families were heavily involved in the hotel business; the Rodicks ran the Rodick House, and the Higgins operated the Deering House, the Harbor House, the Way Side Inn, and the Ocean House. These families, and particularly David, Fountain and Serenus Rodick, served as the financial backers for the proposed enterprise. But it was mainly the brothers Fountain and Serenus Rodick that took control of the company and led it through its early years. Edwin Des Isles provided the technical expertise to get the system started.[20]

The company's charter members recorded their first meeting on February 23, 1874. Setting the pattern for Board meetings and stockholders' meetings for the next 20 years, the meeting was held at the Rodick House. Daniel Rodick served as chairman, and Ely Des Isle, clerk. Action taken at the first meeting was purely administrative. The charter members voted to make the organization permanent and to accept the by-laws that would govern the Company's operation. They voted to form a three person committee to prepare a stock book and they formed a committee to revise the by-laws. From February to the end of June, the charter members, and beginning March 9th, the Board of Directors, met 14 times. Records of these meetings provide rather mundane details about what was going on, but provide no evidence of

[20]Hale, *Story of Bar Harbor*, 139, 145-146; "An Act to Incorporate the Bar Harbor Water Company," *Maine Acts and Resolves* (1874).

the design and building process that was taking place among the more notable events, such as they were: one H. E. Winterbother spoke to the Board as an invited guest; the water committee was instructed to draw up a form by which land owners could acknowledge permission for the company to place its pipes across their property; the Building Committee was authorized to draw up a note for $1,750; and the Building Committee was instructed to establish rates to be charged for water. In response to this last mentioned business, the Building Committee proposed a plan to charge a flat fee based on the kind of dwelling or business involved (Table 1).

Type of Establishment	Example	seasonal rate
1st class hotels	"Bay View, Rodick, Harbor, Agamont, Rockaway, and Atlantic Hotels"	$100
2nd class hotels	"Hamor House, Newport, Deering, Ocean House"	$70
3rd class hotels	"St. Sauveur, Lynam Cottages, Eden Hotels"	$30
cottages for family		$12
cottages for rental		$15
other businesses	"stores, saloons, stables, and markets"	$15
non-resident houses, first class		$35
non-resident houses, second class		$25

Table 1. Water rates proposed to the Bar Harbor Water Company Board of Directors by the Building Committee, June 25, 1874. Presumably, a house was occupied year-round, distinguishing it from a cottage, which was occupied seasonally.

Notwithstanding the paucity of construction information recorded in the Company's records book, the directors and an army of laborers must have worked feverishly. In fact,

accepting a rate schedule on June 25th was the final act recorded by the Board before the new system began carrying water.

According to Bar Harbor historian Richard Hale, Edwin Des Isles was responsible for designing the flumes.[21] Fountain Rodick was also on the building committee, and according to his own testimony, was principally responsible for refinements to the system over the next 20 years.[22] H. E. Winterbother has not been identified, but it seems likely he was an engineer or water system operator called in for advice on the initial design of the system. Presumably his advice was of a general nature, and it does not appear he developed a long term relationship with the company.

Actual construction of an aqueduct, reservoir, and laying of pipes began on May 10th, and the aqueduct and the reservoir were finished within 30 days. The system was officially dedicated on July 4, 1874, and by the middle of that month, after just 65 days of construction, newly laid pipes were providing water to each of the hotels and cottages then in Bar Harbor.[23]

Outside of town, word of the new water system was spread, partly through planted newspaper stories and letters. On June 10th, the New York *Tribune* published a letter on its editorial page attributed to Bar Harbor Selectman Stephen Higgins, cited as an "occasional correspondent." The heading for the letter announced "Mount Desert Island—Cause of the Typhoid Fever There Last Year—The Drainage regulated so as to Prevent all Possibility of a

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[21]Hale, *Story of Bar Harbor*, 145.

[22]Testimony of Fountain Rodick before the Maine Senate Judiciary Committee, February 4, 1887. Reported in the *Mount Desert Herald* February 18, 1887.

[23]Testimony of Fountain Rodick before the Maine Senate Judiciary Committee, February 4, 1887. Reported in the *Mount Desert Herald* February 18, 1887; Hale, *Story of Bar Harbor*, 146

Recurrence of the Trouble—Delicious Drives, Mountain Walks and Scenery—Abundant Trout."[24] Higgins neither identified himself as the proprietor of a hotel nor as one of the seven directors of the Bar Harbor Water Company.[25]

[24]Hale, *Story of Bar Harbor*, 146.

[25]Minutes of the Directors Meeting held November 9, 1874, Bar Harbor Water Company Records Book 1:5, on file, Bar Harbor Water Company, Bar Harbor, Maine.

CHAPTER 3

EARLY DEVELOPMENT OF THE BAR HARBOR WATER COMPANY, 1874 TO 1893

In 1949, a Maine Public Utilities Commission auditor studied the Bar Harbor Water Company's early books. He concluded that the company had accomplished little before 1881. Based on other sources, however, this statement is clearly inaccurate; the Rodicks put a working system together in a matter of months, and made steady improvements over the subsequent decade. The reason for the auditor's statement, is that the company records book do not fully reflect the decision making process in the early years or the degree of progress that the company made in improving and expanding the system.

Management of the Bar Harbor Water Company, 1874-1893

Formally, the Bar Harbor Water Company was organized as a corporation. In 1874, it operated accordingly; shareholder meetings were held, and directors were elected, and officers appointed. The directors appointed various subcommittees, including a stock book committee, whose sole task was to find and purchase a book for recording names of shareholders, a building committee, and a water committee. Fountain Rodick served on each of these committees, and fairly quickly, he and his brother Serenus became the dominant personalities in the company. As a result, Fountain and Serenus came to operate the company more as a partnership than a corporation. Quite naturally, they began overlooking the trappings of a corporation, including the election of officers or holding regular directors meetings and yearly stockholders meetings.

Discussions and meetings no doubt were held in informal settings, but the transactions were never recorded in the book reserved for formal management meetings.

Thus, the spate of stockholders and directors meetings held from February to June, 1874 preceded long periods in which the directors were, apparently, inactive, interspersed with brief periods in which numerous meetings were held. The next formal meeting was not recorded until almost a year and a half later, on November 1, 1875. In the months of November and December 1875 and January 1876, no fewer than 15 stockholders meetings were held. In some cases, the records note only the place (office of the Rodick House) the date, and that there were "speeches by members." Most meetings, however, failed to attract a quorum and were adjourned without any business taking place. Eventually, on January 10, 1876, the shareholders approved a new rate schedule. The only time in this series of meetings in which concrete business took place, this also marked the last meeting recorded, and probably the last meeting held, for the next five years.

Between January 29, and April 4, 1881, another string of meetings was called, this time on an apparently more urgent issue. The water company was receiving complaints from customers concerning inadequate water pressure and interruptions in service. Most importantly, fellow Bar Harbor resident and businessman Elihu Hamor threatened to establish a competing water company if the complaints were not effectively addressed.

As before, many of the 1881 meetings resulted only in adjournment for lack of a quorum. The April 4th meeting proved critical, however, as a significant new building program was approved. Perhaps as significant as the announcement of the building program, was that the

shareholders codified what was probably already a defacto arrangement. Namely, they placed all decision making powers in the hands of the company treasurer, Fountain Rodick.

Ever since the initial stock outlay in 1874, incremental infrastructure improvements had been payed for out of company revenues, and when that was inadequate, out of the pocket of Fountain and Serenus Rodick. In order to pay for the large-scale 1881 building program, the Rodicks attempted to spread the costs by assessing each shareholder in the company additional money based on the number of shares they held. Rather than pay this assessment, most of the shareholders outside of the Rodick family chose to surrender their interests to Fountain and Serenus. Over the remainder of 1881 and 1882, the brothers came to own a 97 percent interest in the company. The remaining 3 percent was held by their siblings, Flora Pineo, and Milton and Edward Rodick.

Thereafter, the stockholders conducted and recorded business only twice more in a 12 year period ending in 1893. On December 7, 1882, a shareholders meeting was held in which an additional assessment was approved of $15 for each share owned. The meeting also served to confirm the earlier vote placing Fountain Rodick, now the president, in complete control of the company. On September 12, 1889, the stockholders met, as required by the legislature, to vote on issuing bonds. Finally, on November 21, 1893, the shareholders met in order to surrender the business to new owners, the culmination of a protracted and hostile takeover bid.

Growth of the Bar Harbor Water System, 1874 to 1893

The earliest pieces of the water system were erected in just two months from June 10 to July 15, 1874.[26] The supply end of the system consisted of a combination of raised open flumes and sluices set into ditches. Advantages of this kind of construction over pipes were that they could be built relatively inexpensively from materials readily available from the numerous saw mills in Eastern Maine and that they could be built using expertise found in town. Large pipes suitable for supplying the system would cost more initially and would need to be ordered and shipped from away. Likely, using pipes would have required a much longer lead time before construction could have started. Very likely, too, nobody in town had practical experience in laying large pipes– certainly, the principals of the company had no such expertise.

In its earliest inception, the principals of the Bar Harbor Water Company were David, Fountain, John A., and Serenus H. Rodick; Stephen, Samuel N., Charles, and Albert F Higgins; Alfred Conners, and Edwin G. Des Isle. Most of these men belonged to families with long standing ties to Mount Desert Island and the town of Eden. The Rodick and Higgins families, for instance, were both present by 1770.[27]

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[26]Testimony of Fountain Rodick before the Maine Senate Judiciary Committee, February 4, 1887. Reported in the *Mount Desert Herald* February 18, 1887

[27]The Rodicks were third and fourth generation descendants of Daniel Rodick. Daniel married Betty Hamor in Harpswell in 1764, and then moved east to Frenchmans Bay in 1769. George E. Street, *Mount Desert, A History*, (Boston, Houghton Mifflin, 1926). In 1789, he was among the 108 signers of the oath of allegiance to Massachusetts. Gunnar Hansen, ed. *Mount Desert, An Informal History*. (Mount Desert, Maine, Town of Mount Desert, 1989), 16. The Higgins clan descended from Israel Higgins. He may have lived in town as early as 1763, but in any case, by 1770. Hale, *Story of Bar Harbor*, 16, 77.

Edwin Des Isles and Fountain Rodick directed initial construction of the new system.[28] Des Isles learned how to build flumes while mining in the west. As a result, the flume used by the Bar Harbor Water Company closely resembled those used to supply water to mining operations. Each section of the flume was built from closely fitted planks that formed the bottom and sides. Braces across the top completed the construction.

In a gravity fed pipe system, no part of the pipe may rise higher than the surface of the reservoir that feeds the system, but the pipes otherwise can be laid to follow the land as it rises and falls. Because flumes are open at the top, a system made from them must be engineered in a substantially different way than a pipe based system. In particular, the slope of flumes must be continually downward and without low spots. Partly, this requirement was met through careful routing. Additionally, the flumes could be either raised on legs or cribs, or in other places, set into an excavated ditch, to achieve the necessary pitch. Also, whereas a pipe can be buried in order to protect it from freezing in northern climates, a flume is open to the air and is exposed to freezing.

Although no plan has been found of the route used for the original flume, the flume's starting point and several intermediary positions are known; by "connecting the dots," it is possible to reconstruct the approximate route the flume must have followed (Figure 9). The Bar Harbor Water Company initially took its water from New Mills Meadow.[29] Remnants of three

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[28]Hale, *Story of Bar Harbor*, 145

[29]Testimony of Elihu Hamor. In "Notes on Hamor Mill/Bar Harbor Water Company lawsuit, January 1898: 11. On file Bar Harbor Water Company. Confusingly, Fountain Rodick is quoted as stating that the original flume was 1 ½ miles long and 2 ½ miles long. The implication of a 1 ½ mile long flume is that its upper end was at New Mills Meadow. If the flume was 2 ½ miles long or more, then the upper end must have been at Eagle Lake, located 2

dams survive just below the pond on Duck Brook. The company may have built one of these dams to regulate the flow out of New Mills Meadow and to divert water into the flume in 1874. If so, the upper most dam was probably the first built. Most likely, the site of this dam was also the site of an earlier mill, probably abandoned before the 1840s. The other two dams at the outlet to New Mills Meadow date from 1884 when improvements were made to the system.

New Mills Meadow is at an elevation of 210 feet above sea level. The flume certainly did not rise higher than this at any point, and it probably remained near the 200' contour for as far as possible. From New Mills Meadow, the flume followed the west wall of the Duck Brook gorge. Midway along the gorge, the company built a bridge for the flume across the stream valley. Based on a contemporary photograph of the bridge (Figure 10), it has been possible to determine where it was located. Specifically, the photograph was taken at or near the current location of the carriage road on the west side of Duck Brook about 1/4 mile north of the Duck Brook carriage road bridge (Figure 11). The identity of the crossing point was corroborated by the discovery of split granite blocks in the stream and on the stream banks below this site.

On the east side of Duck Brook, the flume was built around the north ridge of Great Hill, still at nearly the 200 foot elevation contour. Then, a sluice dropped rapidly down the steep east slope of the hill. A surviving ditch cut into the ground and bedrock shows where the sluice made its descent.

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miles from the village center, as the crow flies, and at least 2.5 miles as a flume would have to go, passing north of Great Hill. Testimony of Fountain Rodick before the Maine Senate Judiciary Committee, February 3, 1887. Reported in the *Mount Desert Herald* February 18, 1887.

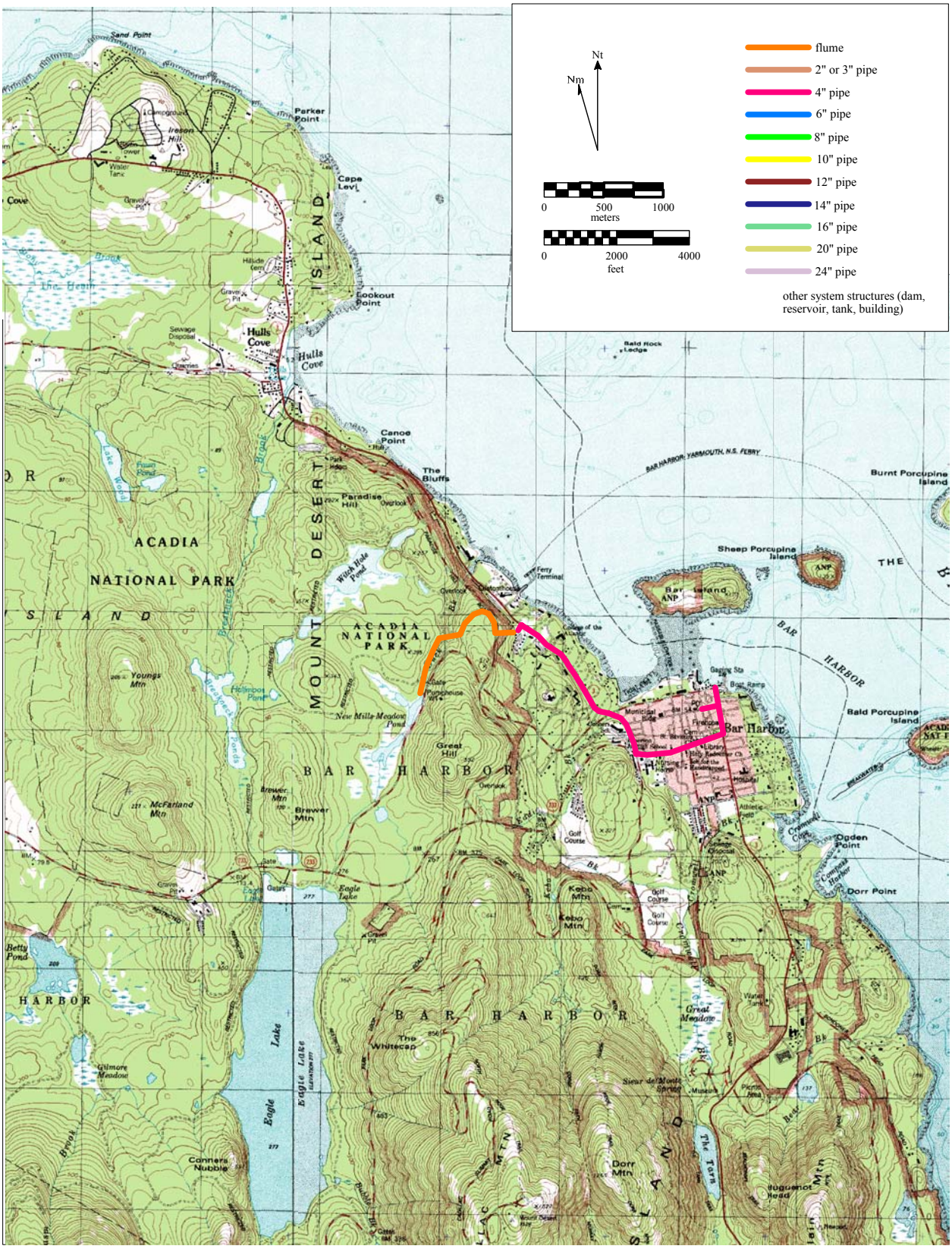

Figure 9. Conjectural plan of the Bar Harbor water system in the summer, 1874.

Figure 10. Bar Harbor Water Company aqueduct, viewed east across the Duck Brook Valley, 1874-1884. Photographer unknown, excerpted from steroscopic pair. Courtesy of the Maine Historic Preservation Commission.

Figure 11. The view east across the Duck Brook Valley in 2004. Figure 10 was photographed from approximately the same location.

According to Fountain Rodick, the flume carried water to a reservoir at Scot's Hill, at an elevation of around 100 feet.[30] The name Scott's Hill cannot be found on any Mount Desert Island maps dating back to the 1770s. Perhaps "Scot's Hill" merely refers to the toe of Great Hill. If so, the reservoir might have stood on a parcel purchased by Serenus and Fountain Rodick on the south side of Eden Street.[31] The surviving sluice ditch on the east slope of Great Hill ends at this lot behind a modern motor lodge near the current intersection of Eden Street and Meadowbrook Road. Alternatively, Scott's Hill could be a currently unnamed hill lying between Highbrook and Bloomfield Roads and Eden Street (Figure 9).

The Scott's Hill Reservoir was 80 feet long, 40 feet wide, and 8 to 10 feet deep. It thus held something like 150,000 to 190,000 gallons of water. Most likely, it was built of stone, the favored building material of the water company in its early years. Though the flume started at an elevation of about 210 feet, it was the Scott's Hill reservoir at 100 feet in elevation that served as the "head" of the pipes, and thus controlled the pressure available on the distribution system.

The 1874 distribution system consisted of 4" mains lying 4' under ground. The service area was limited to between 50 and 75 customers in what was still a modest sized village in

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[30]The elevation is interpreted from statements made by Fountain Rodick. Specifically, he indicated that with construction of a new reservoir on Cunningham's Hill in 1881, the "head" was doubled. Since the location of the Cunningham's Hill reservoir is known and its elevation is at elevation 200 feet, then half that is 100 feet, more or less. Testimony of Fountain Rodick before the Maine Senate Judiciary Committee, February 3, 1887. Reported in the *Mount Desert Herald* February 18, 1887.

[31]Leonard & Son "Map of Bar Harbor, Maine." Map printed for A. Stroud Rodick Real Estate, Bar Harbor Maine. (Philadelphia, Leonard & Son, ca. 1901).

1874. Pipes extended along part of Eden Street, Mount Desert Street, part of Maine Street, and part of Cottage Street (Figures 9 and 12).[32]

As the population of Bar Harbor grew through the 1870s, the water system's distribution network also needed to expand. The water company met this need by laying additional 2" and 4" mains, especially in the years 1875-1877. As the village expanded inland from the harbor, however, new hotel and cottage construction occurred at ever higher elevations. Very quickly, the elevation of new hotels and cottages overtook the elevation of the reservoir; many potential customers found that they could not receive a reliable water supply from the system.

It was in 1880 that hotel operator Elihu Hamor threatened to establish a competing water company if the Bar Harbor Water Company could not guarantee improvements to the supply at his hotel. Responding to this threat, Fountain Rodick promised to provide better service. Hamor, in turn, promised to place his threatened charter application on hold.

Merely laying new pipes would not correct the shortage of water at high elevations. Poor water pressure at higher elevations could only be solved if the company raised the height of the reservoir where water was transferred from flume to the distribution pipes. To this end, the Bar Harbor Water Company announced plans to build a new reservoir on what it called Cunninghams Hill in April, 1881.[33]

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[32]Testimony of Fountain Rodick before the Maine Senate Judiciary Committee, February 3, 1887. Reported in the *Mount Desert Herald* February 18, 1887.

[33]Published notice dated April 4, 1881, attached to Bar Harbor Water Company Records Book 1:23. Like the name "Scott's Hill, the name Cunningham's hill does not appear on any maps. The location is confirmed by a plan at the Bar Harbor Water Company office. A section of the north ridge of Great Hill once belonged to belonged to A. P. Cunningham.

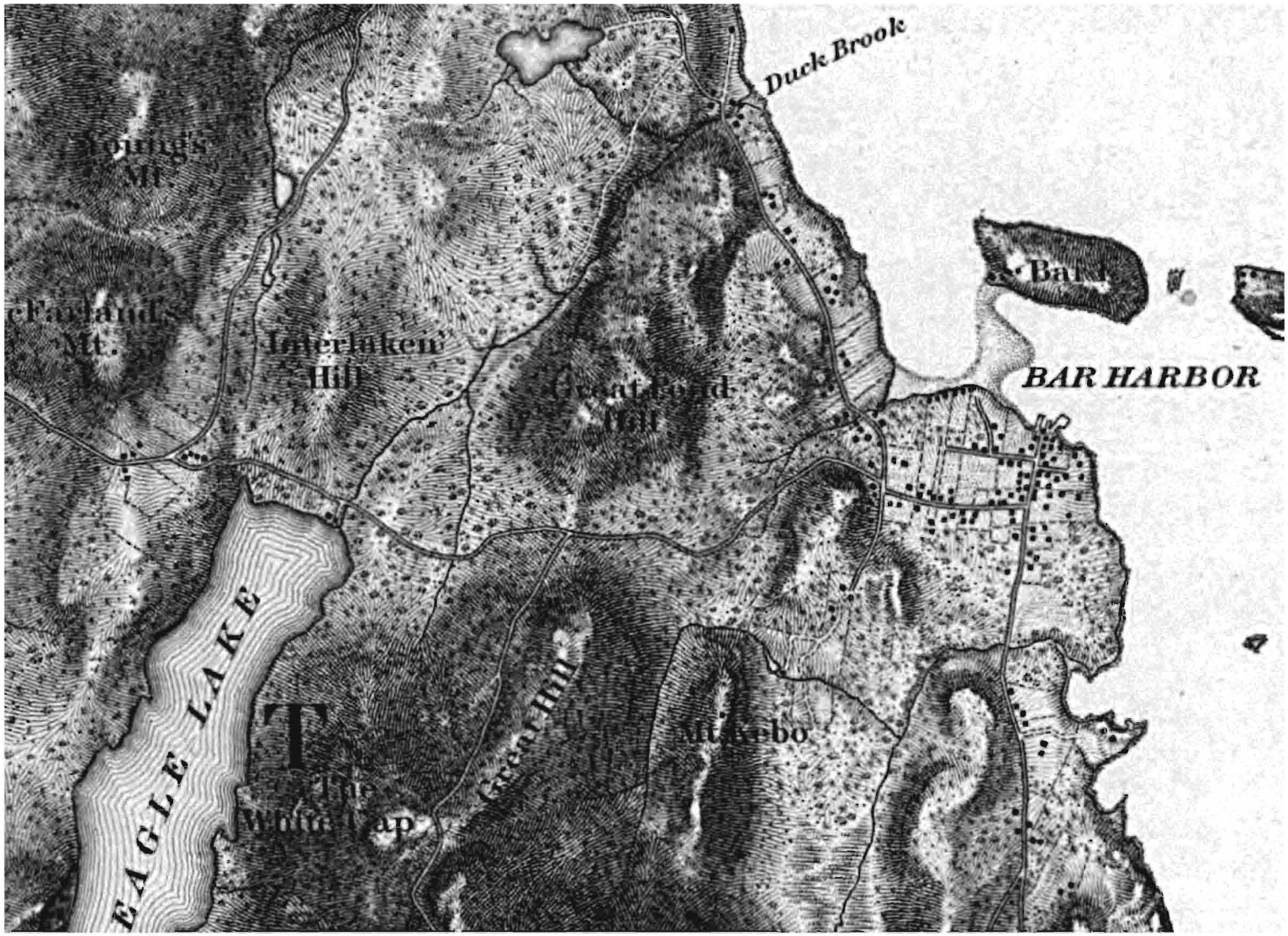

Figure 12. Bar Harbor and environs, 1875. Notice that downtown street development is limited to Eden St., Mount Desert St., Maine St., and the east end of Cottage St. Excerpted from the "Mount Desert, Maine," 1:80,000 scale map. U.S. Coast Survey (Washington, D.C. 1875).

The company placed the new reservoir on the route of the flume. At an elevation of 200 feet, the new reservoir provided double the head of the Scott's Hill Reservoir, which then was abandoned . In conjunction with the reservoir, the Bar Harbor Water Company installed a 10" main from the reservoir into town. This main followed the route of the old flume down the hill, and then detoured to Eden Street. The new pipe roughly followed Eden Street to Mount Desert Street. The Bar Harbor Water Company also announced plans for "a new dam and other works at the present head of the flume" and a dam and gate house at Eagle Lake.[34] It does not appear, however, that construction occurred immediately.

In the years since its founding, the Bar Harbor Water Company had primarily financed improvements through its revenues. The major construction of 1881, however, required larger sums. To this end, the company assessed its shareholders for further contributions. Not surprisingly, most of the stockholders decided that they no longer were interested in the company, now that it would cost them rather than pay dividends. As a result, Fountain and Serenus Rodick, who had always been the largest shareholders and the most active participants in the company management, bought up the shares no longer wanted by others. By 1882, members of the Rodick family owned all 1000 shares of company stock.

While the new reservoir and larger mains answered Elihu Hamor's needs, complaints must have continued. Within three years, the company undertook a major improvement to its system once again. In 1884, the company took up its earlier plans to revamp the infrastructure at New Mills Meadow by building a new reservoir complex, laying a supply pipe from the new

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[34]Published notice dated May 23, 1881, attached to Bar Harbor Water Company Records Book 1, April 11, 1881:23.

reservoir to Eden Street , and abandoning the flume and sluice system and the Cunningham Hill reservoir (Figure 13).[35]

When completed, the New Mills Meadow complex comprised three dams, a reservoir, and a bypass canal (Figure 14). The uppermost of the three dams probably dates from 1874, and was located at the very outlet of New Mills Meadow Pond where it served to raise the level of pond. The second dam in the complex was located thirty feet downstream. If too much water passed over the first dam, this one diverted the excess into a small bypass canal on the east side of the stream. The canal carried the excess water beyond the third and final dam where it was returned to Duck Brook. The third dam was the tallest (Figure 15 and 16). It was situated 250 feet downstream from the second, and stood near the site of the existing Carriage Road bridge. This dam held back the reservoir itself.

By entirely replacing the flume with a pipe, the company raised the system's "head" by an additional 25' from what it was at the Cunningham's Hill reservoir. The new 12" diameter pipe started at the new reservoir, and roughly followed the east bank of Duck Brook for 2,200 feet (670 m). It then diverged from the brook to the east, to where it met Eden Street. As noted in the introduction, it was this 12" pipe on the side of Duck Brook whose abandonment led to the undertaking of the current project.[36]

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[35]Testimony of Fountain Rodick before the Maine Senate Judiciary Committee, February 3, 1887. Reported in the *Mount Desert Herald* February 18, 1887.

[36]The exact date this pipe was installed had been a question, but is now clear. Casting marks on the pipe show it was manufactured in 1883. Fountain Rodick explicitly stated that the 12" pipe was installed from the new reservoir to Eden Street in 1884. By 1893, the Bar Harbor Water Company was being sued for damages related to installation of this pipe, and this suit remained an issue for the company until 1901. In 1904, the Duck Brook line was cleaned, indicating it had been in use for many years by that date.

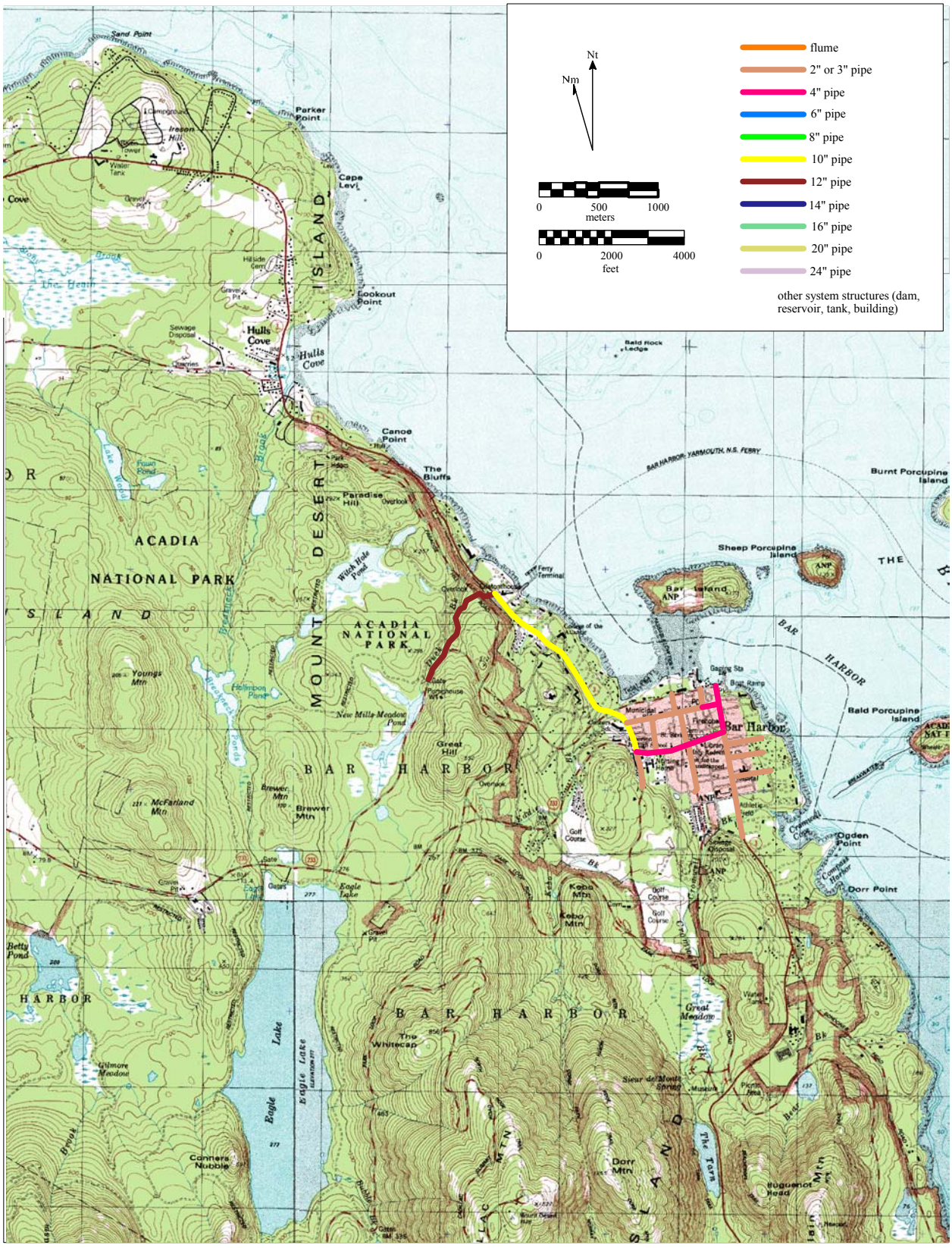
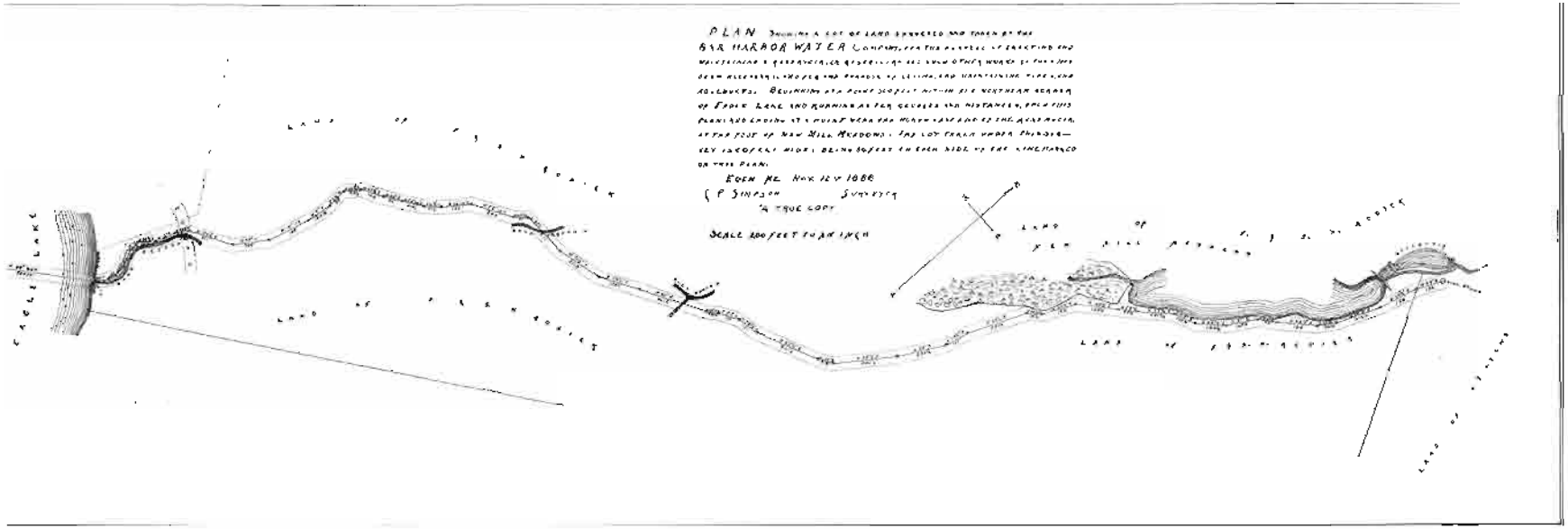
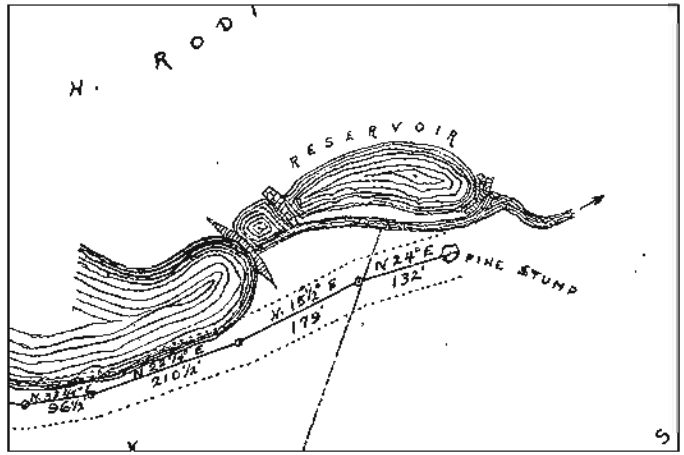


Figure 13. Conjectural plan of the Bar Harbor water system in 1884. By this time, the Scott's Hill and Cunningham Hill Reservoirs were abandoned, and the wooden flume was replaced with a 12" iron pipe.



A.



B.

Figure 14. (A., above) 1886 plan of proposed right of way for new 24" and 16" pipe between pipe Eagle Lake and New Mills Meadow. (B., right) Detail of reservoir at the outlet to New Mills Meadow showing series of three dams and bypass canal. Courtesy of the Bar Harbor Water Company.

Figure 15. Labeled merely "Duck Brook Falls," this is the only known image of the dam that formed the reservoir below New Mills Meadow. By the time this picture was taken, the structure was partially in ruins. The lower end of the canal structure is at left. W. H. Sherman, Bar Harbor, photograph. Courtesy of the Maine Historic Preservation Commission.

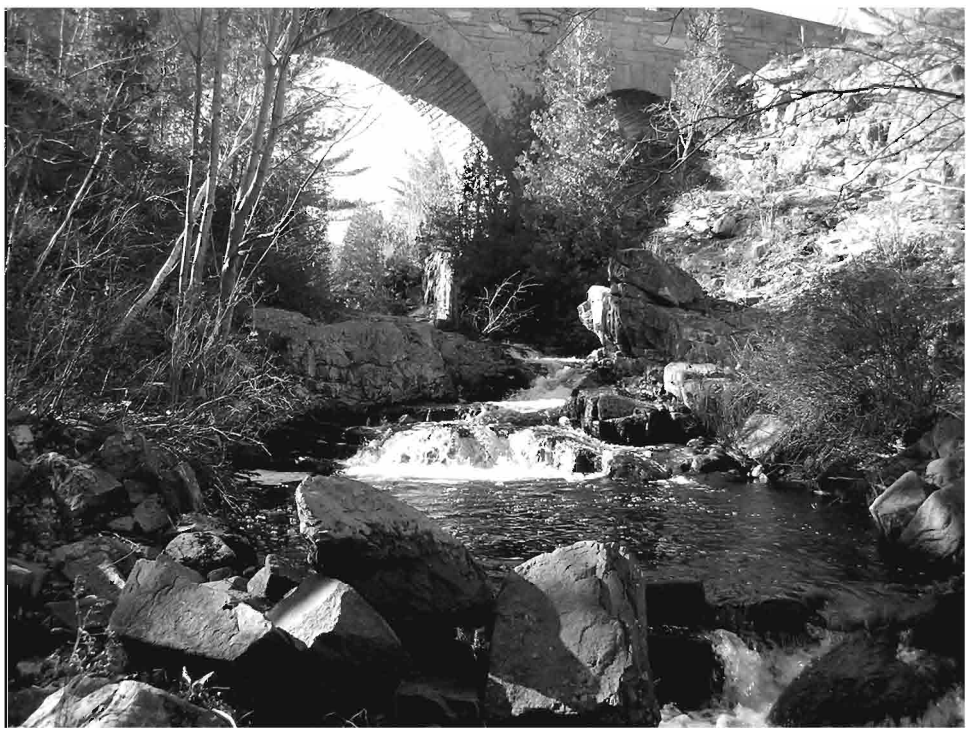


Figure 16. Approximately the same view shown in figure 14, as seen in 2004. If the dam was still present, it would be visible on the far side of the Duck Brook Carriage Road Bridge through the arch. The split granite blocks in the foreground may be part of the old dam structure.

In spite of heavy investments made by the owners of the Water Company into its infrastructure— $45,000 between 1881 and 1884— some customers remained dissatisfied.[37] This time, complaints included the familiar low or unreliable water pressure; but also included unannounced interruptions to service; sediments in the water; and eels.

As had happened earlier, the water pressure problems stemmed partially from the expansion of hotel and cottage construction to higher elevations, approaching the level of the system's head. The water supply was also taxed by high water usage, attributable to lawn sprinklers. The eel problem, inexplicably offensive to some people, was caused when men working on the intake pipe broke a screen in the fall of 1884. Over the next several weeks, eels become caught in narrow pipes in the distribution system, stopping water flow. Pipes joints then needed to be separated and the eels extracted.[38]

By the 1880s, visitors and summer residents of Bar Harbor were no longer rusticators willing to live under primitive conditions. More and more of the visitors were members of the social elite from the major cities along the east coast of the United States; these people liked to take their comforts for granted. One of the comforts they expected was a plumbing system that provided clean water under adequate pressure. Though the Rodicks continued to expand and improve their water system, they did not fully meet the expectations of the elite summer-only

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[37]Testimony of Fountain Rodick before the Maine Senate Judiciary Committee, February 3, 1887. Reported in the *Mount Desert Herald* February 18, 1887.

[38]Each of these problems was discussed at length in testimony before the Maine Senate Judiciary Committee, February 3 through February 11, 1887. Reported in the *Mount Desert Herald* February 11 and February 18, 1887.

residents, nor apparently, all of their fellow long-time full-year residents. In 1886, an influential group of these unsatisfied customers decided to take drastic steps to force a change.

In Summer, 1886, the region experienced a drought. By August, a group of men, mostly summer residents, became alarmed as they watched the water dropping at the New Mills Meadow and approaching a level where the system's intake pipe would be left dry. Several of these men, including David Ogden, S.E. Lyon, W. S. Gurnee, DeGrasse Fox, and Morris K. Jessup, took it upon themselves to call James T. Gardiner to review the situation and make recommendations. Gardiner was a civil engineer from New York, a summer resident of Northeast Harbor, and the man responsible for construction of the water system in Northeast Harbor in 1885.

Gardiner inspected the Bar Harbor system and concluded that insufficient water was flowing from Eagle Lake to New Mills Meadow to keep up with demand. He met with Fountain Rodick, and recommended that he have a channel cut at the outlet of Eagle Lake to permit more water to flow into Duck Brook. Gardiner even recommended the exact location where the cut should be made.[39]

Though Rodick responded that a water famine was not imminent, he agreed to follow the engineer's advice. Workers made the cut, and by September 3, 1.8 million gallons a day was reaching the intake pipe. Still, Gardiner stated that the residents had every right to expect four

[39]Testimony of James Gardiner before the Maine Senate Judiciary Committee, February 2, 1887. Reported in the *Mount Desert Herald* February 11, 1887.

million gallons a day, if the system was operated correctly, and that there was no reason they shouldn't be able to put as much water on their lawns as they liked.[40]

Still not satisfied with the Rodick's management of the water system, the group that had obtained Gardiner's assistance, along with several other like minded summer residents and a few year-round residents, decided to take a further step to solve problems caused, as they saw it, by an incompetent and intractable management. In mid September, 1886, they organized the Eden Water Company.[41] At first, and perhaps always, their plan was not to build a competing water system, rather to take control of the existing Bar Harbor Water System, and place it under new management. The directors of the Eden Water Company wrote a letter to the Rodicks offering to buy their water company, and demanding a response by November 15th.[42]

When the Rodick's failed to respond to the offer by the specified date– Fountain Rodick claimed he did not receive the letter until November 16th– the Eden Water Company moved to their second plan. With the opening of the January session of the legislature, they requested a charter that would give to them all the authority and obligations currently held by the Bar Harbor Water Company.

During the mid-1880s, new water companies were granted charters by the legislature on an almost daily basis, and generally with little debate. The Eden Water Company's request was

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[40]Testimony of James Gardiner before the Maine Senate Judiciary Committee, February 2, 1887. Reported in the *Mount Desert Herald* February 11, 1887.

[41]Testimony of John T. Higgins before the Maine Senate Judiciary Committee, February 2, 1887. Reported in the *Mount Desert Herald* February 11, 1887.

[42]The letter, dated October 15, 1886, has not been found. Testimony of John T. Higgins before the Maine Senate Judiciary Committee, February 2, 1887. Reported in the *Mount Desert Herald* February 11, 1887.

unusual, however, in that the new company was seeking to operate in an area serviced by an existing company. Because of this, the senate judiciary committee heard four days of testimony from supporters of the new company and from opponents.

Testifying in support of the Eden Water Company charter were several of the new company's members, as well as several hotel operators: James Gardiner, the civil engineer, John Clark, chief engineer for the Bar Harbor Fire Company, and most notably, James Blaine, former U.S. congressman, senator, secretary of state, and one time presidential candidate. At the time, Blaine was also a summer resident of Bar Harbor. In addition to airing the complaints about poor water pressure, inadequate fire protection, threatened shortages, and eels, the supporters of the new company framed their opposition to the old company in surprisingly populist terms. The Eden Water Company, they said, had many stockholders and was opened to anyone that wanted to buy in. In contrast, the Bar Harbor Water Company was an unjust monopoly owned by a single family– a family who alone stood doggedly and unreasonably in the way of progress. This tone was taken by the Eden Water Company attorney, but especially, by witness James Blaine.[43]

The *Mount Desert Herald* was having none of this populist rhetoric from Blaine or the Eden Water Company:

> "Of course, such a charter would render the present system of our village a superfluity and the injury to the owners thereof would be very great.... The Messrs. F. And S. H. Rodick... naturally feel some anxiety as to the outcome of this unusual and somewhat remarkable attempt to depreciate their property... and divert their chartered rights to the use and benefits of others. Moreover, the citizens of Bar Harbor generally, inheriting the love of justice inherent to most natives of the Pine Tree State, feel somewhat aggrieved,

[43]Testimony of James G. Blaine before the Maine Senate Judiciary Committee, February 2, 1887. Reported in the *Mount Desert Herald* February 11, 1887.

> and quite anxious that such a manifestly unjust measure should not be countenanced by our representatives in legislature assembled."[44]

Over the next two weeks, the paper republished items from Portland and Machias that were also critical, in particular, of Blaine's involvement and rhetoric. Perhaps not surprisingly, given the lobbying efforts of both companies, the Portland item was prepared and submitted to that paper by an anonymous "Mount Desert Islander."[45]

In opposition to creation of the new company, the Rodicks marshaled an army of witnesses of their own. Foremost among these was Fountain Rodick whose testimony carried over to a second day. He described the development of the Bar Harbor Water Company, detailed the investments made, amounting to $100,000 by 1887, and spelled out what was being done to rectify the current problems. His testimony was followed by a series of mostly year-round residents who testified that they received ample water and good service.

Notwithstanding the efforts of the Rodicks and the support of the *Mount Desert Herald*, a split judiciary committee forwarded a compromise bill to the full senate for its consideration. The bill would grant the Eden Water Company a charter similar to those held by other water companies in the state. These included:

> "authority to erect a dam or dams at the outlet of Eagle Lake...; authority to cross any water course, private or public sewer, or to change the direction thereof...; authority to lay down, and in and through the streets and ways in said town of Eden, and to take up and replace and repair all such pipes, aqueducts and fixtures as may be necessary for the purpose of their incorporation; and authority to take and hold any lands necessary for

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[44] *Mount Desert Herald* February 11, 1887.

[45] *Mount Desert Herald* February 18, 1887.

> flowage, and also for its dams, reservoirs, locks, gates, hydrants, and other necessary structures....”[46]

It is apparent that these powers were in direct conflict with the powers already granted to the Bar Harbor Water Company under its 1874 charter and by amendments granted by the legislature in 1880.[47] Most damaging to the Bar Harbor Water Company would be the provision to take control of the Eagle Lake waters. The compromise was found in Section 11, which required that the Eden Water Company renew its offer to purchase the Bar Harbor Water Company:

> “On or before May one, eighteen hundred and eighty-seven, the Eden Water Company shall give to Bar Harbor Water Company written notice, offering to buy all the property and franchises of the Bar Harbor Water Company....”[48]

The remainder of the section spelled out deadlines for the Bar Harbor Water Company’s responses, and mechanism for the transfer of the property.

In a 1949 discussion of the Eden Water Company/Bar Harbor Water Company controversy, historian Richard Hale, Jr. characterized the appearance of the new company as bringing “competition” to the water business.[49] He went on to cast the origin of the controversy between the companies as a fight between full-time residents and part-time residents to control the town’s destiny, as well as a tale of a David versus a Goliath:

> “Either Bar Harbor would own itself, or outsiders would own it. On one side was [James Blaine] who failed only by chance to become President of the United States...; on the other side were a boarding house keeper whose boarding house had grown and a

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[46]“An act to grant certain powers to the Eden Water Company, March 11, 1887.” Maine Acts and Resolves (1887); Chapter 244.

[47]Maine Acts and Resolves (1880); Chapter 265

[48]“An act to grant certain powers to the Eden Water Company, March 11, 1887.” Maine Acts and Resolves (1887), Chapter 244.

[49]Hale, *Story of Bar Harbor*, 163.

> fisherman whose fortunes had risen. Behind the great statesman were outsiders from New York and Philadelphia; behind the local business men were their fellow residents of Eden. And when it appeared that the local business men could manage their own affairs, and it was so proved in spite of Blaine's silver tongue, it was clear that Bar Harbor was a summer resort that would preserve its independence."[50]

This characterization certainly captures part of what occurred; the Bar Harbor Water Company had been founded and nurtured by locals, and, by 1887, was wholly-owned by members of the Rodick family, life-long Bar Harbor residents all. Meanwhile, ownership of the Eden Water Company was dominated by summer residents whose principal residences were out of state, and most of whom were powerful business forces in their own rights. But not all Eden residents supported the Rodicks, and several, including members of both the Higgins and Hamor clans, held shares in the Eden Water Company. However, the Eden Water Company was not conceived as a company that would compete with the Bar Harbor Company in the normal sense; it was conceived as a tool for wresting control of the existing water system from the Rodicks.

To say that the Rodicks won in 1887 also misses a major part of the story. The victory they won before the judiciary committee, that the Eden Water Company would have to repeat its offer to purchase their company before it could go into business in its own right, was a small one indeed. Furthermore the fight before the judiciary committee was merely the opening salvo in a war that had six more years to run. In the end, the Eden Water Company received a full victory, and the Rodicks were forced to surrender.

Even as the events surrounding formation of the Eden Water Company played out, the Bar Harbor Water Company was taking steps to further improve its system. In the fall of 1885, Fountain Rodick had a survey made for a new pipe from Eagle Lake to New Mills Meadow. By

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[50]Hale, *Story of Bar Harbor*, 163-164.

August, 1886, even as Gardiner was making his inspection, a crew was excavating the trench for the upper end of new pipe (Figure 14).[51]

Starting in the late winter, 1887, the Bar Harbor Water Company built a new stone standpipe below Eagle Lake and laid a 16" pipe from it to a point just beyond New Mills Meadow. There, the new 16" pipe was connected to the old 12" Duck Brook line. The company was also anticipating delivery of approximately 1,550 feet of 24" pipe to be placed from Eagle Lake to the 16" pipe. However, the 24" pipe is actually marked with the date "1888" (Figure 39) suggesting that receipt of the pipe was delayed until at least one year later. When the 24" and 16" pipe were finally connected, the New Mills Meadow reservoir was cut out of the water system and abandoned. The 24" pipe was buried for much of its length, but the 16" pipe was placed on the ground surface. Both pipes remain in service to this day.[52]

To finance the new pipes, the state legislature authorized the Bar Harbor Water Company to increase its capital stock from $50,000 to $100,000 in 1885.[53] In 1887, they company was further authorized to increase their stock to $250,000,[54] and in 1889, the company directors were authorized for the first time to raise money for these improvements by selling company bonds.

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[51]Testimony of Fountain Rodick before the Maine Senate Judiciary Committee, February 4, 1887. Reported in the *Mount Desert Herald* February 18, 1887.

[52]Testimony of Fountain Rodick before the Maine Senate Judiciary Committee, February 4, 1887. Reported in the *Mount Desert Herald* February 18, 1887. That the stone standpipe was built at this time is an inference.

[53]*Maine Acts and Resolves* (1885), Chapter 456

[54]*Maine Acts and Resolves* (1887), Chapter 219

Significantly, the directors were authorized to secure its bonds "by a mortgage upon all its property, both real and personal, and also upon the franchise of said corporation."[55]

Over the fifteen years that the company had been upgrading its supply system, it had not neglected its distribution network. A rudimentary system of distribution pipes provided limited service in town in 1874. While the supply end of the system consisted first of a flume and then 12", 16", and 24" pipes, the distribution system was made up of smaller pipes, ranging from 2" in diameter up to 10" in diameter. By the late 1880s and early 1890s, the geographic scope of the distribution system was taking on the overall coverage that it retains today (Figure 17). Many of the smallest pipes, 2", 3" and 4" in diameter, have since been upgraded to 6", 8" and 10" sizes, but still, some pipes underlying the streets of Bar Harbor are the same size as were in place in the early 1890s. In all likelihood, some of the existing pipes were, in fact, laid in the 1880s or even in the 1870s.

Barbarians at the Gate: 1887-1893

In spite of its victory in 1887, there is little evidence of activity within the Eden Water Company before 1893. Whatever offers might have been made to purchase the facilities of the Bar Harbor Water Company were shunned, and there is no evidence that the new company undertook any construction in its own right. Meanwhile, the owners of the Bar Harbor Water Company continued to invest heavily in improvements, sold bonds to finance the operation, and mortgaged its facilities to back those bonds.

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[55] *Maine Acts and Resolves* (1889), Chapter 446

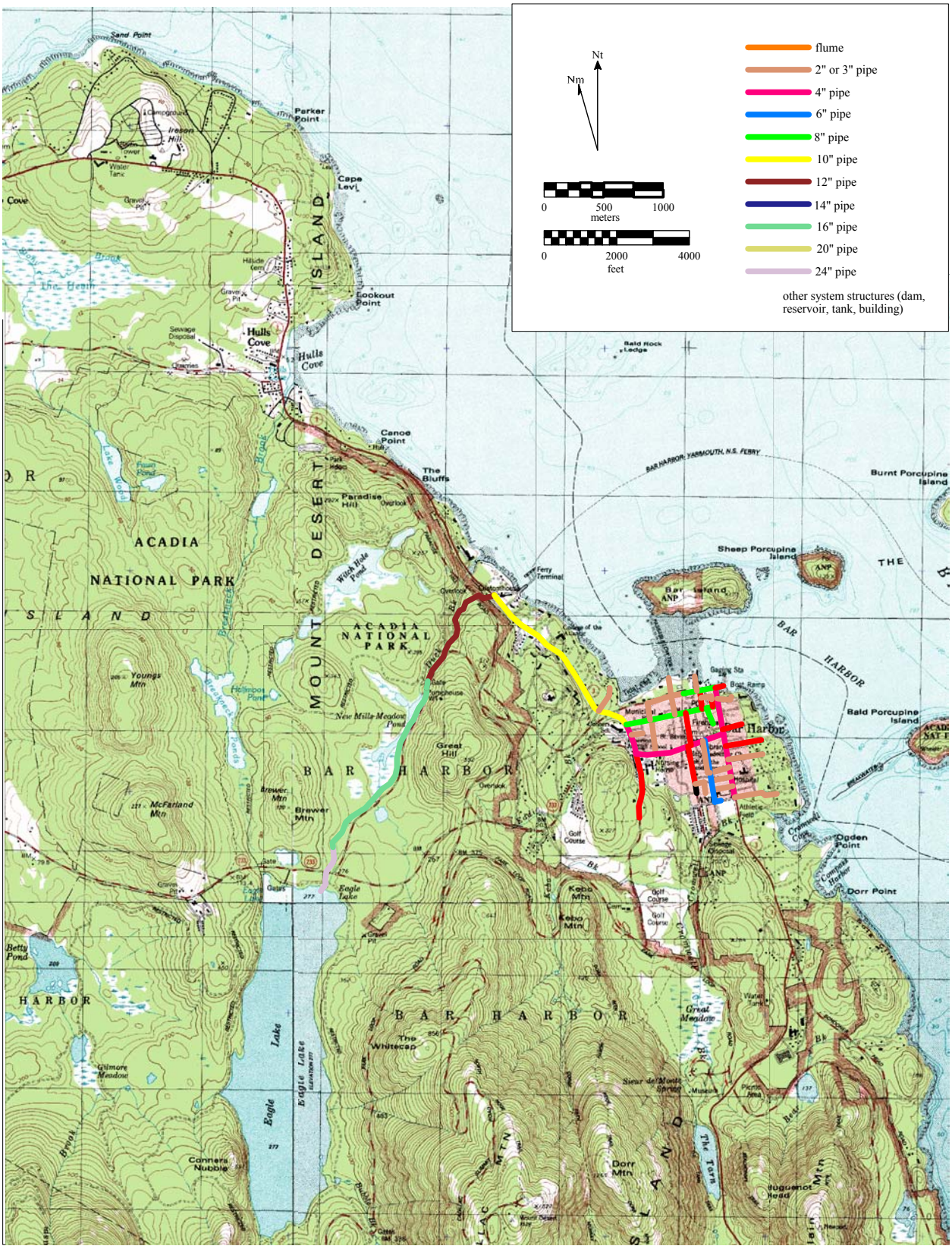

Figure 17. Conjectural plan of the Bar Harbor water system in 1887. Water was now taken directly from Eagle Lake, via a 24" and 16" supply main, and each of the earlier reservoirs was abandoned. To the degree possible, the pipe sizes shown in the downtown distribution network reflect pipe sizes known to have been in place in 1893.

Despite the investments they made into new construction, the Rodicks were unable to silence critics of the company. In 1893, the Eden Water Company went to the Maine legislature to seek a new charter to replace the one received in 1887– presumably their prior charter had become void because of the company's inactivity.[56] The charter they sought would be similar to the one received in 1887, but would not provide a provision for the purchase of the Bar Harbor Water Company by the Eden Water Company. The new charter would, however, provide the Bar Harbor Water Company a way to prevent the new charter from taking affect. Specifically, the Eden Water Company's new charter would be void if the Bar Harbor Water Company began making certain improvements by July 1, 1893, and completed those improvements by January 1, 1894.

The list of improvements required in that six month period was extensive. Probably, the Bar Harbor Water Company could not have met the conditions for preventing the new charter from taking affect, even if it had the chance. In any case, events overtook the time line spelled out under the new charter, and the charter was never invoked.

The Bar Harbor Water Company had been investing heavily in its infrastructure since 1887. In doing so, they had issued $150,000 in bonds in 1889, through the Portland Trust Company. As provided by law, these were backed by a mortgage on the company itself.

By 1893, the Bar Harbor Water Company may still have been meeting its obligations to make payments on that mortgage. However, Fountain and Serenus Rodick were also in personal debt. Apparently, that debt was a result other business ventures, rather than investments in the

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[56]Section 12 of their charter reads: "In case the Eden Water Company fails to do and perform any of the acts required of them under the provisions of section eleven, this charter shall thereupon become null and void." *Maine Acts and Resolves*, (1887), Chapter 244.

water company. But, they had secured that debt using their shares in the Water Company as collateral. By November, 1893, the brothers were in default.

On November 21st, a special meeting was called of the Bar Harbor Water Company's shareholders. Present were all shareholders in the company: Flora [Rodick] Pineo, Milton Rodick, Edward Rodick, Fountain Rodick, and Serenus H. Rodick (Table 2). The company clerk, Stephen Kingsley was also present, as was one J. F. Whitaker "holding nine hundred and ninety five shares of said capital stock to secure a debt from said F. and S.H. Rodick."[57] Clearly, the proceedings that followed were dictated by Mr. Whitaker, who sought to protect his investment. Just as clearly, he took his direction from the principals of the Eden Water Company.

Name	Residence	Shares Held
F. and S. H. Rodick (jointly)	Bar Harbor, ME	995
Fountain Rodick	Bar Harbor, ME	1
Serenus H. Rodick	Bar Harbor, ME	1
Flora [Rodick] Pineo	Bar Harbor, ME	1
Milton Rodick	Bar Harbor, ME	1
Edward B. Rodick	Bar Harbor, ME	1

Table 2. Shareholders in the Bar Harbor Water Company, November 21, 1893.

Mr. Whitaker's presence indeed proved to be a portent. In the first business of the day, the meeting took the unusual step to vote "that all bills due the Company prior to October 1,

[57]Minutes of the Stockholders Meeting Held at the Office of the Rodick House November 13, 1893, Bar Harbor Water Company Records Book 1: 55.

1893 be transferred and assigned to F. and S. H. Rodick." Next, the company voted to issue an additional $55,000 in bonds. Again, the company itself was put up as collateral, but this time the bonds were issued through the Bar Harbor Banking and Trust Company. The directors were then authorized to deliver $35,000 in new bonds to Fountain and Serenus Rodick.

Business then moved to approving amendments to several of the company's by laws, including the description of the company's seal and the way in which directors could be approved. The share holders also voted to increase the number of stocks available in the company from 1,000 to 2,000. The scenario was completed by three final pieces of business. Henceforth, stockholders and directors meetings would not be held at the office of the Rodick House as had been customary, but would be held instead at the law offices of Deasy and Higgins. The shareholders then accepted the resignations of the entire board of directors and the clerk, effective with the acceptance of a new board. And finally, the assembled shareholders elected a new board. Named to the board were John S. Kennedy, David B. Ogden, and William H. L. Lea, all of New York City; Charles J. Morrill, of Boston, and Fred C. Lynam, of Bar Harbor.

The non-resident board members were each well known and successful business men, who also happened to maintain summer cottages in Bar Harbor. The sole local member of the new board, Fred Lynam, was also successful, and not coincidentally, was president of the Bar Harbor Bank and Trust Company, which it had just been voted, would issue the new company bonds. The names of each of these men could also be found on the list of shareholders in the Eden Water Company.

Over the next year, Mr. Whitaker sold his shares in the Bar Harbor Water to other interested parties. By November 1894, the company had 20 shareholders (Table 3), 9 of whom

also held shares in the Eden Water Company (Table 4). Significantly, these nine owners held 981 of the 1,371 shares in the company, a 72 percent interest. These same individuals had held 199 out of 524 shares in the Eden Water Company, or a 38 percent interest. Furthermore, Fred C. Lynam served as treasurer of the Eden Water Company, and beginning in 1894, superintendent of the Bar Harbor Water Company. Lynam was also at one time in the firm of Deasy, Higgins & Co. That firm held shares in the Eden Water Company in 1893, and served as council for the Bar Harbor Water Company after its takeover in 1894.

Thus, with the election of the new board and Whitaker's subsequent dispersal of his shares, the Bar Harbor Water Company and the Eden Water Company were, for practical purposes, one and the same thing. Over the next two years, the two companies were formally merged. The new board of the Bar Harbor Water Company immediately resolved to pay back the investors that had incurred costs in forming the Eden Water Company and presenting its case to the legislature.[58] Then, in 1895, the directors finalized and executed a plan to purchase the shares of the Eden Water Company by swapping them for shares of the Bar Harbor Water Company.[59] The two companies merged, and though the name was that of the older company, the managers and owners were those of the Eden Water Company. The Eden Water Company had won. The Bar Harbor Water Company would not remain in the hands of locals, but would become dominated by powerful business men from away.

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[58]Minutes of the Directors Meeting November 24, 1893. Records Book 1:70.

[59]Minutes of the Annual Stockholders Meeting August 20, 1895. Records Book 1:110. Specifically, the Eden Water Company stocks, valued at $2.50, would be purchased with shares of the Bar Harbor Water Company, valued at par.

Name	Residence	Shares
J. [James] T. Woodward	New York, NY	100
Chas. T. How	Eden, ME	100
C. J. Morrill	Boston, Mass.	100
John S. Kennedy	New York, N.Y.	200
G. (George) W. Vanderbilt	New York, N.Y.	200
Johnston Livingston	New York, NY	200
J. M. Sears	Boston, Mass.	100
Geo. A. Robbins	New York, NY	100
W.S. Gurnee	New York, NY	60
Reuben Hugh	New York, NY	40
Wm. Lawrence	Boston, Mass.	40
A.C. Barney	Washington, D.C.	20
Living Grant & Rice Trustee	New York, NY	20
C.M. Smith	Philadelphia, PA	20
James B. Markoe	Philadelphia, PA	20
Edward Coles	Philadelphia, PA	20
David B. Ogden	New York, NY	10
Mary C. Jones	New York, NY	10
Payne Goodwin	New York, NY	10
Fred C. Lynam	Bar Harbor, ME	1
	Total:	1371

Table 3. Shareholders in the Bar Harbor Water Company, November 21, 1894. Table is arranged by number of shares owned. Shaded names also appear on the list of shareholders in the Eden Water Company in 1893 (compare Table 4).

Name	Residence	Shares
Morris K. Jesup	New York, NY	76
W. S. Gurnee	New York, NY	76
Johnston Livingston	Tivoli, NY	39
J. [James] T. Woodward	New York, NY	38
May W. Bowler	Eden, ME	38
E.T. Hamor	Eden, ME	30
Wm. B. Howard	Chicago, Ill.	30
Payson Tucker	Ellsworth, ME	30
Chas. T. How	Eden, ME	28 9/10
Louise Bowler Livingston	Cincinnati, OH	28 4/5
W. H. L. Lee	New York, NY	19
Henry La Barre Jayne	Philadelphia, PA	19
Executor of W.H. Rowle	Philadelphia, PA	15 8/25
F.A. Wilson	Bangor, ME	12 3/5
Edward Coles	Philadelphia, PA	7 3/5
DeGrasse Fox	Philadelphia, PA	7 3/5
C. J. Morrill	Boston, Mass.	7 3/5
D. W. Brewer	Eden, ME	6
Edward Samuel	Philadelphia, PA	4 ½
Deasy & Higgins	Eden, ME	3 3/4
E. H. Greely	Ellsworth, ME	3
F.W, Lawrence	Boston, Mass.	1 9/10
Gardiner Sherman	New York, NY	1 9/10
Harriet Fox	Philadelphia, PA	1 9/10
Charlotte Pendleton	Philadelphia, PA	1 9/10
Mary Shannon	Boston, Mass.	1 9/10
Arthur W. Biddle	Philadelphia, PA	1 4/5
Executor of John Markoe	Philadelphia, PA	1 9/25
John S. Kennedy	New York, N.Y.	1
G. (George) W. Vanderbilt	New York, N.Y.	1
James B. Markoe	Philadelphia, PA	4/5
O.H. Carpenter	Eden, ME	19/25
Executrix of Mary Shannon	Boston, Mass	19/25
Beatrix Jones	Philadelphia, PA	19/25
S. [Samuel] J. Clements	Eden, ME	3/4
E. M.. Hamor	Eden, ME	18/25
H.E. Hamlin	Ellsworth, ME	19/100
Fred C. Lynam	Eden, ME	3/25
A.T. Freedley		—
	Total:	524 34/100

Table 4. Shareholders in the Eden Water Company, November 1, 1893. Table is arranged by number of shares owned. Shaded names became shareholders in the Bar Harbor Water Company in 1894 (compare Table 3).

CHAPTER 4

THE BAR HARBOR WATER COMPANY UNDER NEW MANAGEMENT, 1893 TO 2004

Management after 1893

Having finally wrested control of the Bar Harbor Water Company, the new directors immediately set to correcting what they perceive as shortcomings inherited from the Rodicks. Most of these shortcomings were physical–principally, inadequate piping at both the supply and distribution ends of the system. They also restored the corporate machinery, instituting regular directors meetings, executive committee meetings, annual shareholders meetings, and publication of annual reports. These changes were in keeping with the character of the new shareholders, in general, and the board of directors, specifically. Shareholders included such national and international business giants as George W. Vanderbilt and Morris K. Jesup, as well as numerous lesser known but nonetheless successful business men of Boston, New York, and Philadelphia (Table 4).

The Board of Directors was a subset of such businessmen, and included John S. Kennedy, David B. Ogden, and William H. L. Lee. Local businessman Fred C. Lynam, was the sole member of the board whose family had long ties to Bar Harbor. Henceforth, directors and executive committee meetings were only held in Bar Harbor in the summer. For the remainder of the year, meetings were held either at the office of John S. Kennedy or William Lee, in New York City. At the first meeting of the new board, Lynam was elected president, a position he retained until his death nearly 50 years later, in 1942. In the same meeting, Dr. William Rogers, of Bar Harbor, was appointed superintendent.

In the course of placing the company on a more business-like footing, the board found itself needing to address a legal problem inherited from the Rodicks. This stemmed from the installation of the 12" Duck Brook line in 1884. The three property owners whose land the pipe crossed, S. E. Lyon, Mary E. Haight, and M. Carey Lea were now claiming damages. First, they alleged that the Rodicks had not properly condemned a right of way for the pipe. Second, they claimed that the pipe was not laid within the contested right-of-way in any case. A survey carried out by the water company in 1899 confirmed the latter claim, at least. The 12" Duck Brook Pipe roughly paralleled the supposed right of way, but generally lay 20 to 100 feet too far east (Figure 18).

Because of the possibility of a judgement against the company, an indemnity agreement was arranged with Fountain and Serenus Rodicks. The Rodicks gave $23,000 in bonds to be held by the Bar Harbor Water Company until a final settlement was agreed with claimants. This $23,000 appeared on the company books for many years, both as an asset and as a potential liability. Final settlement was reached in 1901 and the claimants paid.

Rebuilding and Expanding, 1894-1909

Having finally seized control of the system, the new directors were in a position to implement the changes they had previously demanded of the Rodicks. This work began immediately and continued at a rapid pace over the next three years. This initial push to bring the system into what the new board considered good working order included building a new office and workshop, replacing many downtown mains with larger diameter pipes, upgrading fire hydrants from 3" to 6", extending the delivery system north to Hulls Cove, and over the course of the next several years, adding several new large supply pipes into town.

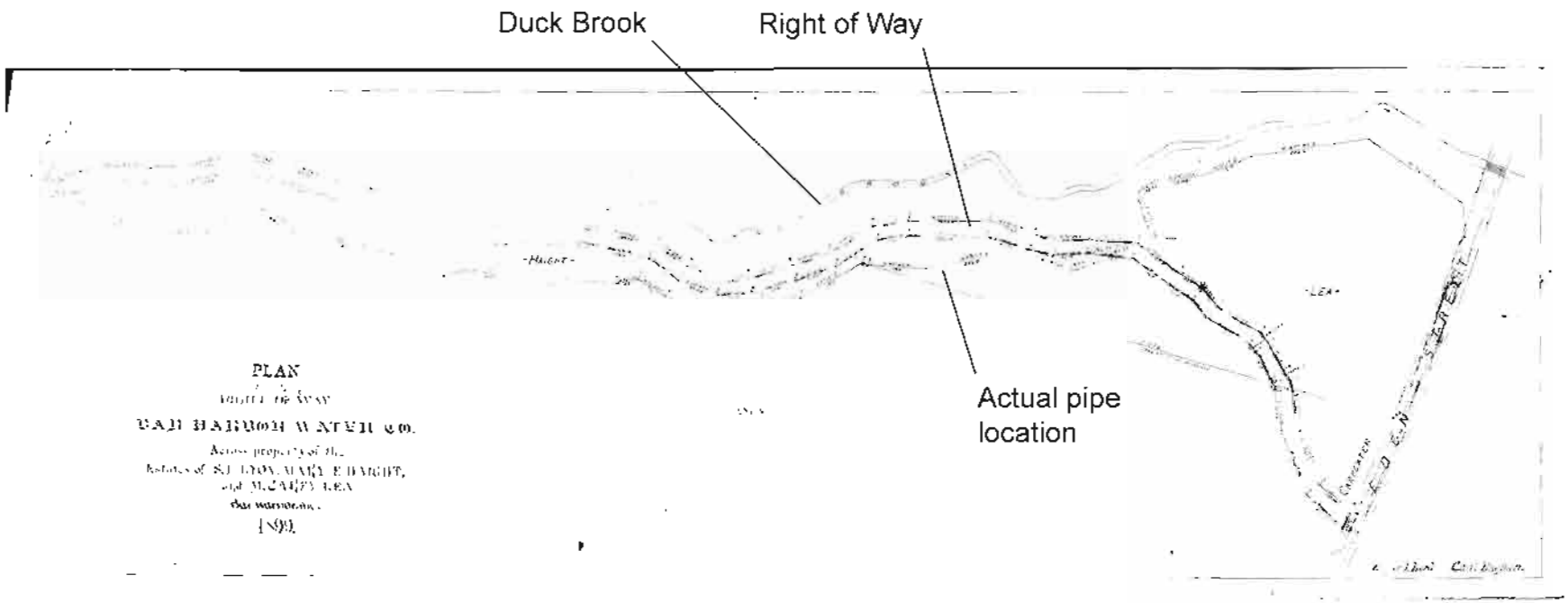

Figure 18. 1899 survey commissioned by the new management of the Bar Harbor Water Company in connection to a lawsuit concerning the 12" Duck Brook line installed by the Rodicks in 1884. The plan clearly shows that the line diverged well to the east of the supposed right of way. The water company settled damages in 1901. Labels in bold added. Courtesy of the Bar Harbor Water Company.

Though the first meeting of the new board was dominated by organizational and financial matters, the directors also began arrangements for new construction. They approved a 6" pipe to the Schooner Head line and instructed the president and treasurer to determine what repairs, improvements, and extensions would be necessary during the spring and summer 1894.[60] Construction activity reported for 1893 included the laying of 800 feet of 8" and 3,200 feet of 6" pipe along Main Street from Mount Desert Street to beyond Cromwell Harbor. In 1894, the company replaced 800 feet of 4" pipe with 10" pipe along Eden Street from Mount Desert Street to Cottage Street.[61] Through the spring of 1895, the company continued apace with work on the distribution system, laying 2" and 3" pipe in a number of side streets. The company also purchased a small lot on Main Street where it built a new office and workshop. This building remains in use by the company today (Figure 19).

In 1895, the company also began laying the 8" pipe extension to Hulls Cove,[62] greatly expanding the company's service area, and began laying larger pipes of 12" and greater to improve the supply end of the system. In particular, 2300 feet of 14" pipe was laid from the end of the 16" pipe at New Mills Meadow, around Great Hill, and over 1500 feet of 12" pipe was laid from the end of the new 14" pipe at Woodbury Road to Eagle Lake Road.[63] Laying the 14" pipe was one of the largest undertakings to date. It required a deep cut through bedrock across the

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[60]Minutes of the Directors Meeting November 24, 1893. Records Book 1:67; Minutes of the Directors Meeting December 1, 1893. Records Book 1:71.

[61]Minutes of the Directors Meeting September 7, 1894. Records Book 1:92.

[62]Minutes of the Executive Committee Meeting September 6, 1895. Records Book 1:117; Resolution of the Executive committee, signed outside any regular meeting, January 4, 1896. Records Book 1:127.

[63]Minutes of the Executive Committee Meeting May 8, 1895. Records Book 1:101; Undated resolution of the Executive Committee. Records Book 1:103-104, 106, 107..

Figure 19. Bar Harbor Water Company office and workshop built in 1895. For many years, the upstairs was used as housing for the company superintendent.

north ridge of Great Hill as well as construction of extensive retaining walls to keep the pipe in place on the steep hill slope. In all likelihood, installation of this pipe coincided with construction of the New Eagle Lake Road, now called Duck Brook Road, which follows the same path around the hill. Together, the 12" and 14" pipe provided a second route for water to reach the village in addition to the previously built 12" Duck Brook line.

At the top end of the system, several alterations also were made. First, the company raised the dam at Eagle Lake; during the summer 1895, excessive water use and a drought drew the lake level down and partially exposed the 24" intake pipe.[64] The company abandoned the stone standpipe at the junction of the 24" and 16" pipes below Eagle Lake. As this tower, dating from 1887, was also the site of the system's screens, a new screen house was then needed.[65] As a result the wooden gatehouse at Eagle Lake was replaced by a new brick gatehouse in 1896. The new gate house also served as a screenhouse.[66]

The same year, the mile of surface-lying 16"-pipe above New Mills Meadow was buried under a raised three-foot deep soil bed to protect it from further frost damage.[67] In 1897, a water

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[64]Minutes of the Executive Committee Meeting October 25, 1895. Records Book 1:123; Annual Stockholders Report, September 5, 1896: 1. On File Bar Harbor Water Company; Resolution of the Executive Committee, January 4, 1896. Records Book 1:127.

[65]Minutes of the Directors Meeting January 6, 1896. Records Book 1:145; Annual Stockholders Report, September 5, 1896: 1. On File Bar Harbor Water Company.

[66]Minutes of the Executive Committee Meeting January 16, 1896. Records Book 1:128; Annual Stockholders Report, September 5, 1896: 2. On File Bar Harbor Water Company.

[67]Minutes of the Executive Committee Meeting September 22, 1896. Records Book 1:157; Minutes of the Executive Committee Meeting March 9, 1897. Records Book 1:158; Annual Stockholders Report, August 3, 1897: 1. On File Bar Harbor Water Company.

meter was purchased for installation at the junction of the 24" and 16" pipe, possibly inside the otherwise disused stone tower.[68]

In 1887, Fountain Rodick acknowledged that he did not generally employ professional engineers, preferring to work out design solutions himself. His training in hydraulics, he said, came from thirteen years of practical experience. The new managers believed that this "do it yourself" approach was a fundamental problem with operation of the system under the Rodicks, and were not going to make the same mistake. Thus, for the first time, the work undertaken in 1895, 1896, and 1897, was planned and designed by a trained professional civil engineer. Specifically, they began employing Boston hydraulics engineer Freeman C. Coffin. Thereafter, the company worked with Coffin for all their engineering needs for at least the next decade.

Thus, by 1897, the new management of the company completed its first spate of reconstruction. Guided by Coffin, the system now fully met the current needs of the company's downtown clientele, through both an expanded supply system and expanded distribution system (Figures 20 and 21). In 1898, the company president observed that "... the system is so far perfected that the officers have no longer any apprehension of any failure or serious impairment of the water supply."[69]

Consequently, a lull in major construction occurred in 1898 and 1899, construction in those years being limited to the downtown supply network. By 1900, however, it was becoming clear that the supply system was not adequate to meet the very large demand placed on the system in the summer. It was noted in particular, that the demand was "many times greater per

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[68]Annual Stockholders Report, September 5, 1896: 1. On File Bar Harbor Water Company. Minutes of the Directors Meeting August 7, 1900. Records Book 1:168.

[69]Annual Stockholders Report, August 3, 1897: 3. On File Bar Harbor Water Company.

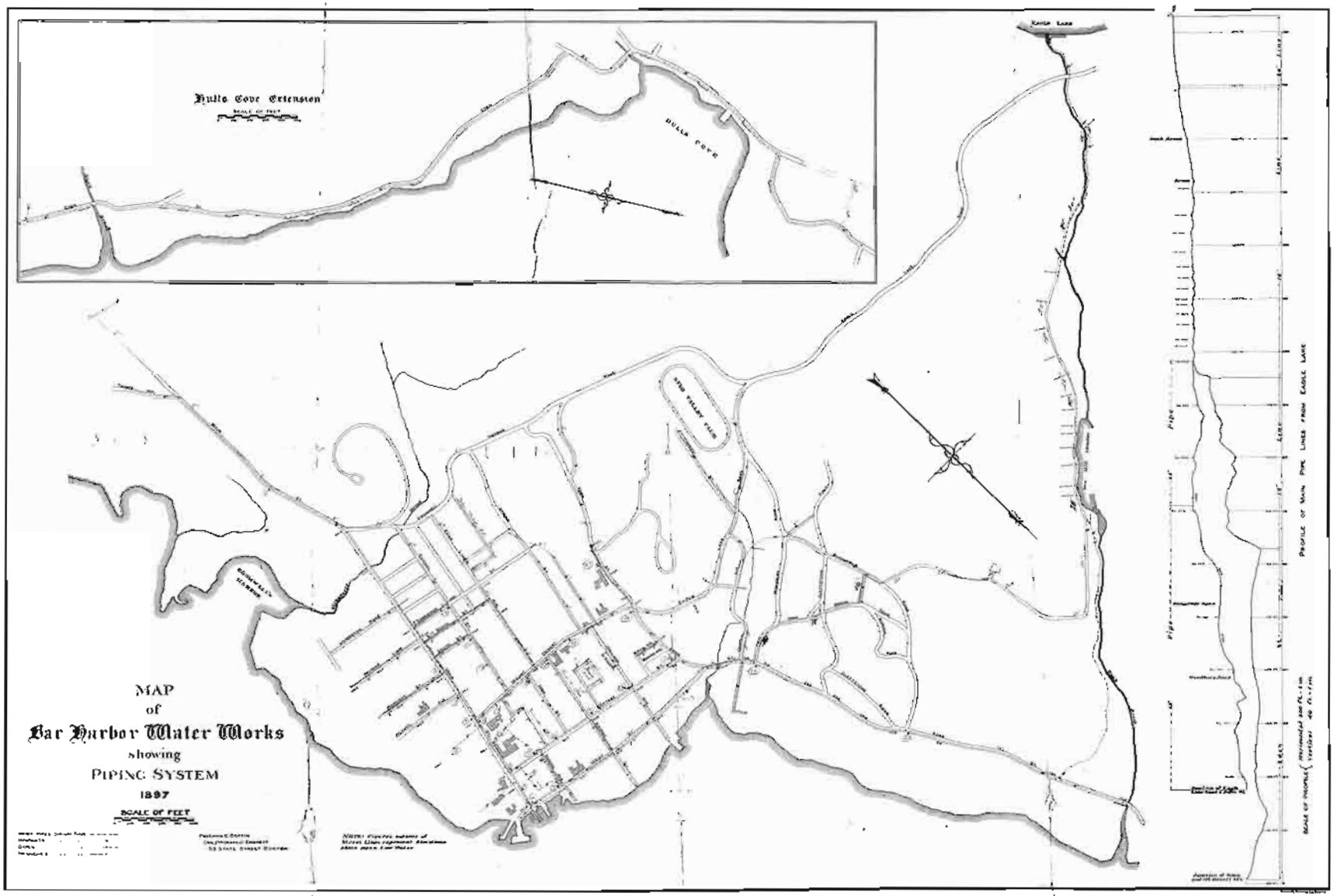

Figure 20. Bar Harbor water system map in 1897.

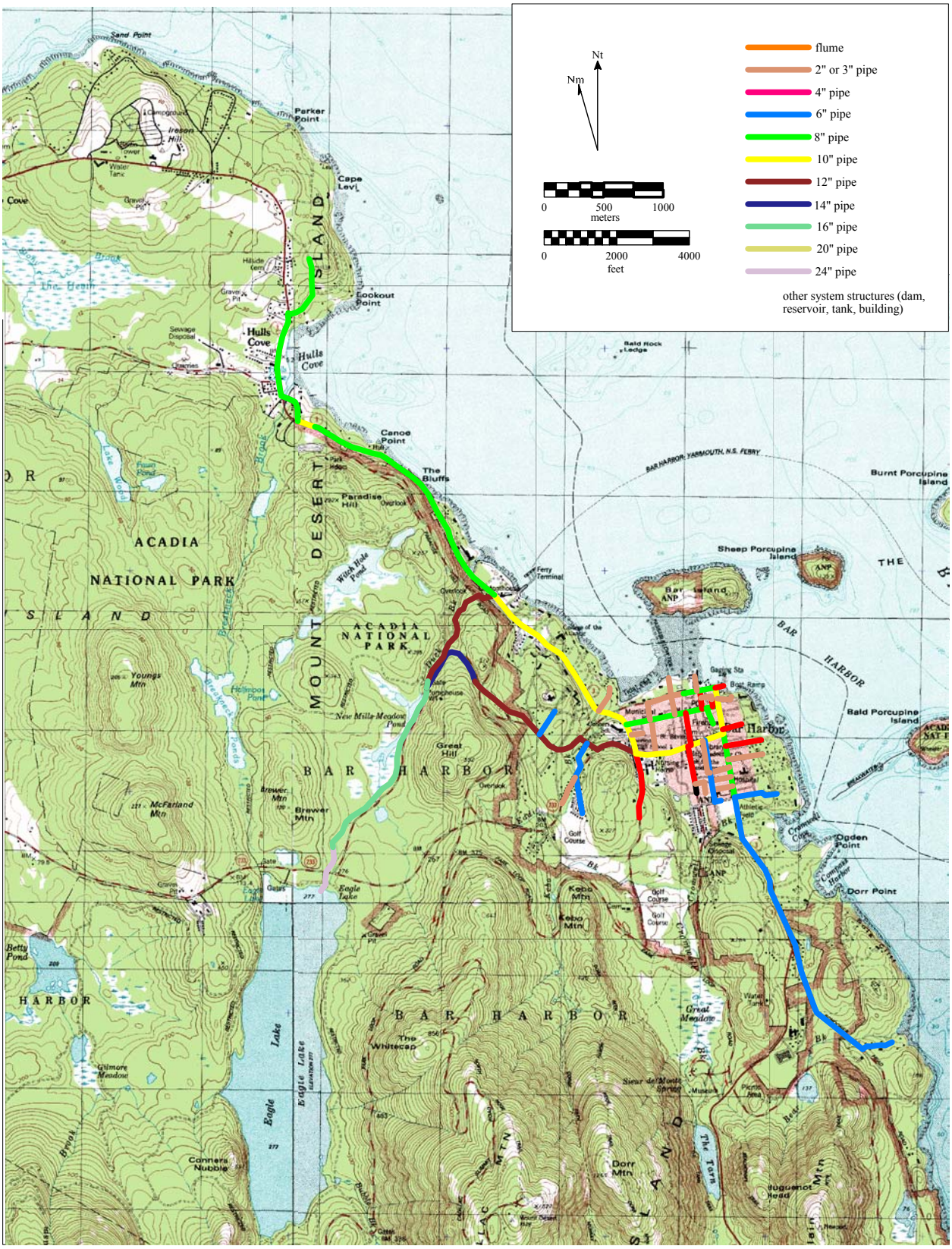

Figure 21. Bar Harbor water system in 1897. In the previous ten years, the downtown distribution system had been greatly expanded and improved with larger mains. Over the same period, additional supply pipes had been laid between New Mills Meadow and town, augmenting the supply from the 12" Duck Brook pipe. Other changes included a new office, and an enlarged dam and a new brick gatehouse at Eagle Lake.

capita than that of the average town or city in the United States." The problem was attributed to lawn sprinklers. While limiting their use was seen as a short term solution, an increase to the supply was seen as the long term solution, as only then would the company meet increased demand likely to occur as the town grew further.[70]

Accordingly, the company undertook and completed construction of a 700,000 gallon reservoir in 1901. This structure was erected above the cut made for the 14" pipe and the Duck Brook Road on Great Hill. Designed by Coffin, this reservoir differed from the earlier reservoirs built by the Rodicks in that it used concrete made from Portland cement as a principal structural element. Invented as far back as 1824, Portland cement only became widely available in the United States during the the 1880s and 1890s. Furthermore, this reservoir was intended only to augment the daytime supply of water that could be fed into the system. The defunct Rodicks reservoirs had been the immediate supply point for the system on a day-by-day and hour-by-hour basis. The reservoir, lying below the elevation of Eagle Lake, would be filled by gravity at night when excess water was available. In order to fully take advantage of the increased supply, the company replaced the 800 foot section of 12" pipe from the bottom of the 14" line into town, and laid a 16" pipe along High Brook Road to Eden Street and along Eden Street as far as West Street.[71] This work was followed, three years later, by the installation of 2,700 feet of 20" pipe from the junction of the 16" pipe and 14" pipe at New Mills Meadow to the new reservoir, augmenting the supply that was otherwise available from the 16" and 14" pipes, and replacement of additional 12" pipe with 20" pipe between the reservoir and Bloomfield Road.[72]

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[70]Annual Stockholders Report, August 8, 1898:1. On File Bar Harbor Water Company. Annual Stockholders Report, August 7, 1900:1. On File Bar Harbor Water Company.

[71]Annual Stockholders Report, August 6, 1901: 1. On File Bar Harbor Water Company.

[72]Minutes of the Directors Meeting September 12, 1904. Records Book 2:114.

In spring and early summer, 1905, a new problem came to the fore in the Bar Harbor Water Company. Namely, water users were complaining about the water's taste and odor. The source of the problem was determined to be a bloom of uroglena at Eagle Lake. Whether this was a new problem, or simply one that had not previously risen to the top of the priority list, is not known. Over the course of several months, the company sought the advice of other water system operators, chemists, state health officials, and their own engineer, Freeman Coffin. Several possible solutions were considered, including the possibility of taking water directly from the many small streams that feed Eagle Lake, rather than taking it from the lake where the algae blooms originated. Their consultants concluded that possibility would not be practical, and in the end, a filtration system was designed and built (Figure 22 and 23).[73] The new filter was placed downstream, or down pipe, from Eagle Lake. The system consisted of two filters and an aeration tank. The primary filter had two side-by-side chambers, each about one-quarter acre in area, made of concrete, and filled with sand. Water brought from Eagle Lake through the 24" pipe poured over the sand surface and was allowed to run down through. The process was repeated in the single-chambered secondary filter, also about one-quarter acre in area. After passing through the secondary filter, the water was pumped through an aeration tank.[74] This tank adjoined the secondary tank, but was only one-tenth acre in area. The filters and aeration tank

[73]Minutes of the Directors Meeting July 7, 1905. Records Book 2:119-120; Minutes of the Directors Meeting July 24, 1905. Records Book 2:121-122; Minutes of the Directors Meeting July 31, 1905; Unpublished Annual Report for 1904. Records Book 2:130.

[74]Annual Stockholders Report, August 7, 1906: 1. On File Bar Harbor Water Company.

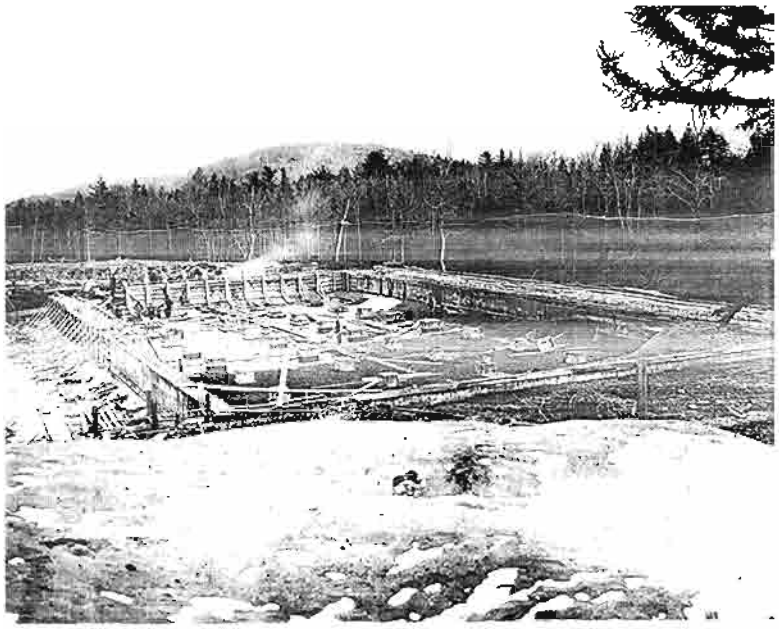

Figure 22. Sand filters under construction 1905-1906.

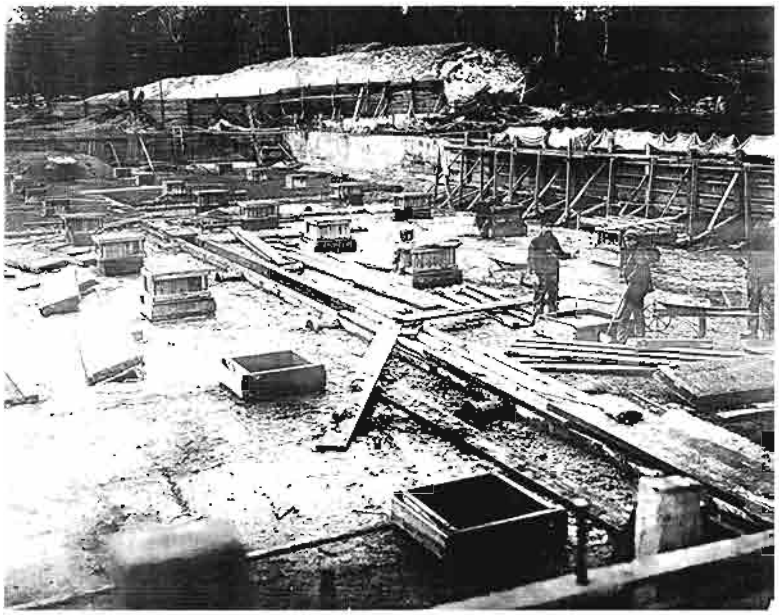

Figure 23. Sand filters under construction 1905-1906.

were not built with roofs. The designers contemplated the possibility of adding roofs later,[75] but that apparently never happened.

The idea of filtering water was not new, as filtered water systems are known to have been used in Mesopotamia as early as 4000 years ago. More recently, the technology was reintroduced in the early 1800s. Paisley, Scotland, acquired a sand-filtered public water system in 1804, and a similar system was put in use in Glasgow two years later. Sand filtering was used in Paris beginning in 1806, in a system that was also one of the first to use aeration to treat water. In the United States, sand filtration was first used in 1832, in Richmond Virginia. That was the only filtered water system in the United States for over twenty years; the second system was installed in Elizabeth, New Jersey, in 1855. In the 1890s, such filtration systems became much more common.[76] Thus, in erecting its sand filter system, and in using reinforced concrete, the Bar Harbor Water Company was certainly keeping up with modern engineering methods. It was not, however, pioneering such technology.

In 1909, the company installed one final major pipe, a 20" line along side the existing 16" pipe between the old stone tower and New Mills Meadow. With that, an adequate supply of water was insured at all times. For the next two decades, the Bar Harbor Water Company found itself settling into a routine of regular maintenance, rather than pursuing a steady program of construction (Figure 24). Indeed, so much surplus capacity was built into the system by the end

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[75]Unpublished Annual Report for 1904. Records Book 2:130. Uroglena is a genus of algae. Periodic blooms are a fairly common nuisance in public water supplies as they cause a "fishy" smell and taste.

[76]Ellen L. Hall and Andrea M. Dietrich "A Brief History of Drinking Water." *Opflow*, Vol. 26, No. 6 (June 2000). Reprinted on the web site of the State of Rhode Island Water Resources Board, http://www.wrb.state.ri.us/programs/eo/historydrinkingwater.htm.

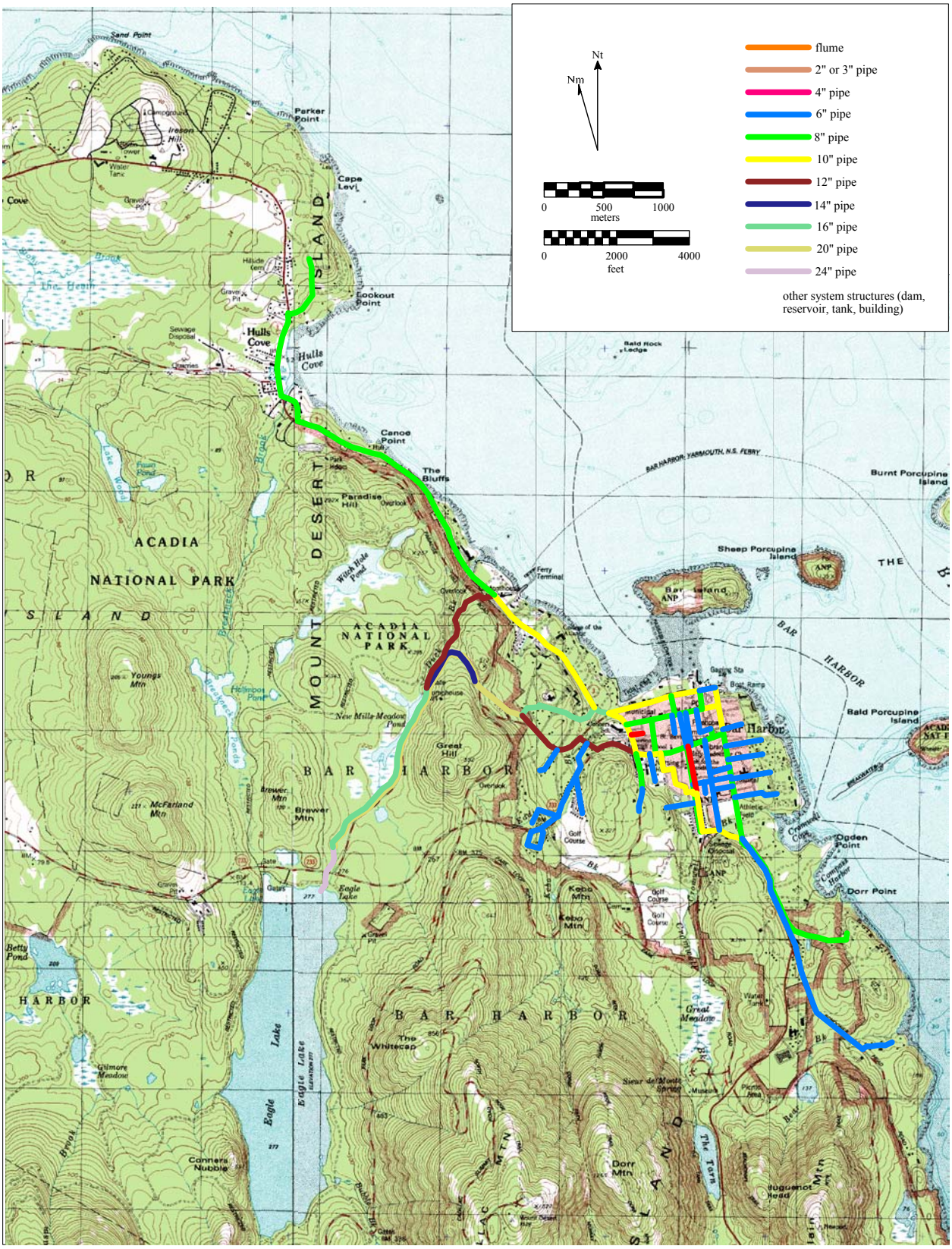

Figure 24. By 1920, the Bar Harbor water system included all of the supply capacity that it has today. A stone and concrete reservoir built in 1901 on the north ridge of Great Hill remained in service, as did the sand filter and aeration system built in 1906 between Eagle Lake and New Mills Meadow.

of 1909 that no further increase in the system's supply capacity has been necessary since then—a remarkable fact, given that Bar Harbor's population has nearly doubled since that time.[77]

Protecting Eagle Lake, 1910-1930

During the time that the Bar Harbor Water Company was in business, there had always been at least one or two buildings on the lake shore, but for most of the period, there were no more than that. Accordingly, the Bar Harbor Water Company did not perceive the limited development as a threat. When the Bar Harbor Water Company was founded, only the small hotel known as the Lake House stood on the shore of Eagle lake, near the lake's outlet to Duck Brook (Figure 25).[78] In about 1885, another small hotel, the Curran House, was built on the slope some 300 feet from the northwest end of the lake. Both hotels rented small boats for use on the lake. Then, in 1886, the Green Mountain Cog Railroad was established to carry tourists up Green Mountain, now named Cadillac Mountain. The railroad company built two wharfs, one near the Lake House and one at the railroad base station on the lake's east shore. These wharves serviced the small steamboat Wauwinnet that carried excursioners from the Lake House to the railroad (Figure 26). The railroad base station comprised at least four buildings up to 200 feet from the waters edge (Figure 27). The railroad lasted just six years, and these buildings fell into disuse. The Lake House hotel reportedly burned by 1894.[79]

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[77]This is total full-time population. The peak summer population may well have increased by an even greater degree. Also, this level of growth is for the whole town, not the population serviced by the Bar Water Company. Lacadie, *United States Census Population Totals, 1790-1990;* Hornsby, et. al., *Cultural Land Use Survey*, Figure 3.1, p. 44.

[78]United States Coast Survey. "Mount Desert Island, Maine." (Washington D.C., United States Coast Survey, 1875).

[79]Francis Marion Crawford, *Bar Harbor*, (New York, Charles Scribner's Sons, 1894). Excerpt in Ruth Ann Hill's *Discovering Old Bar Harbor and Acadia National Park*, 133.

Figure 25. The Lake House, ca. 1880. Though this structure stood on the shore of Eagle Lake from the early 1870s to the 1890s, the Bar Harbor Water Company showed little concern that it might contaminate their water supply. At the time of this photograph, the wharf for the stern-wheel steamboat Wauwinnet (Figure 26) had not yet been built. The wooden structure in the right foreground could be an encarnation of the spillway gate house at the outlet of the lake to Duck Brook, which is just out of sight to the right. Photographer unkown. Courtesy of the Maine Historic Preservation Commission.

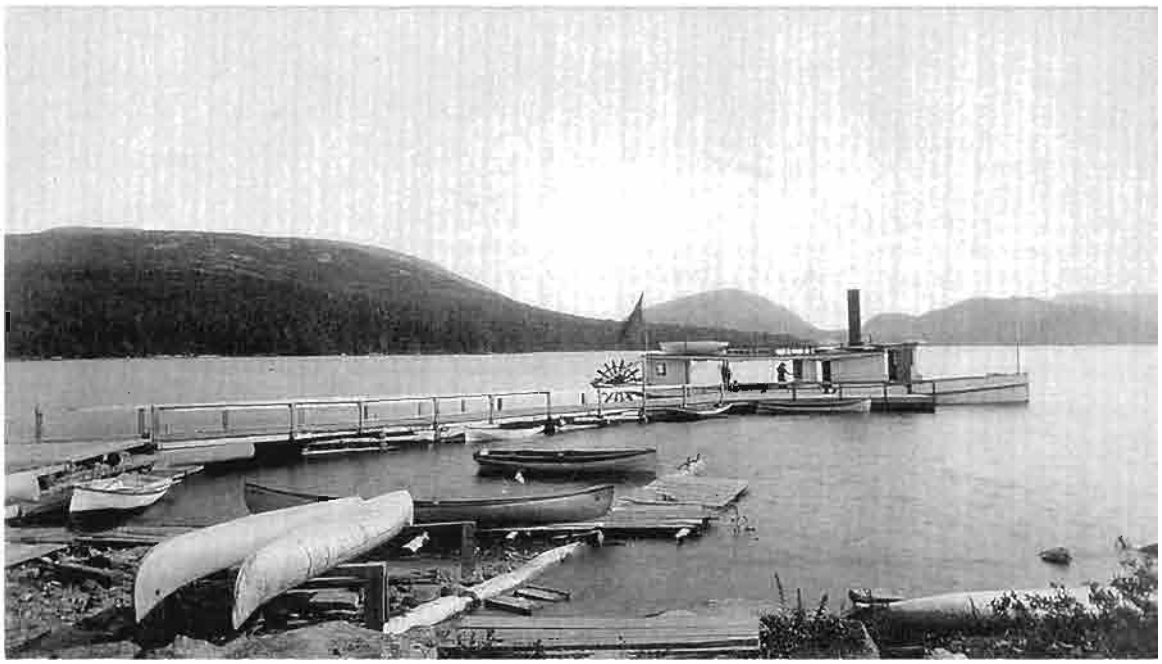

Figure 26. The steamboat Wauwinnet was brought to Eagle Lake to ferry passengers between the Lake House and the Green Mountain Railroad (Figure 27). The railroad base station is out of sight behind the far point just to the left of the smoke stack. Photographer unknown. Courtesy of the Maine Historic Preservation Commission.

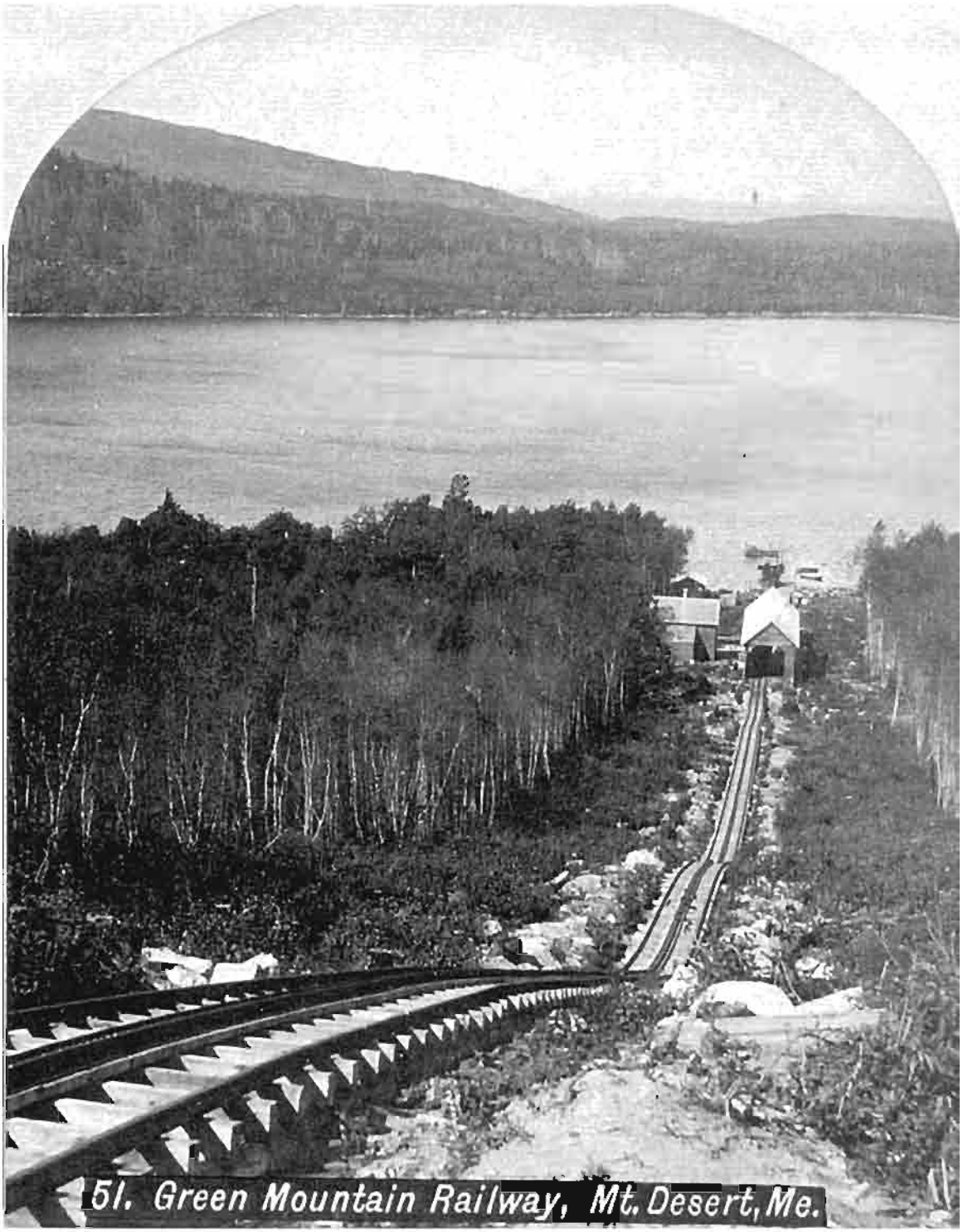

Figure 27. The Green Mountain Railroad base station was located on the east shore of Eagle Lake, two-thirds of the way south along Eagle Lake. As with the Lake House, the Bar Harbor Water Company does not appear to have taken great interest in the railroad facility as a possible source of contamination. Bryant Bradley photograph. Courtesy of the Maine Historic Preservation Commission.

In 1875, the F.W. Brewer Ice Company began cutting ice on the lake. The Eagle Lake ice industry grew out of the local demand for ice created by the yearly influx of summer visitors to Bar Harbor. The company had its headquarters in the village of Bar Harbor, but by about 1900, the company built a modest-sized ice house. In 1904, the icehouse was the only structure mapped on the Lake's Shore.[80]

The limited use of the lake and its shores up to the 1890s had not presented an undue threat to the purity of the water supply, or at least, the threat was small compared to the other problems in the system. The company's first specific effort to protect the lake came shortly before 1900, when it purchased and razed the Curran House. Then, in 1910, Philip Livingston proposed to build a cottage on the lake's east shore. This was a departure in the use of the lake, and it alarmed the Board of Directors. While the threat might be small in and of itself, they feared it was a harbinger of other cottages that would soon follow. In the meeting of January 17, 1910, the executive committee discussed not only the desirability of preventing Livingston from building a cottage, but also, for the first time on record, the need to develop a comprehensive plan to safeguard the future purity of Eagle Lake.[81]

In opposing development around Eagle Lake, the Bar Harbor Water Company found a natural ally in the Hancock County Trustees of Reservations. This organization was founded in 1901. Among its prime movers were Charles W. Eliot, president of Harvard University, and George B. Dorr, later instrumental in founding Acadia National Park. The purpose of the corporation was to purchase and preserve land to protect the scenery valued by the town's

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[80]United States Geological Survey, "Mount Desert 15' quadrangle," (Washington, D.C., United States Geological Survey, 1904).

[81]Minutes of the Executive Committee Meeting January 17, 1910. Records Book 2:234. Letter from the Executive Committee to Philip Livingston dated January 17, 1910. Records Book 2: 237-238.

summer residents.[82] Indeed, there was considerable crossover in membership between the two corporations. George Dorr purchased 22 shares in the Bar Harbor Water Company in 1895, and in 1911, joined its Board of Directors. Conversely, John Kennedy, a Bar Harbor Water Company board member, sat on the Board of Directors for the Trustees, until his death late in 1909.

Working with the Hancock County Trustees of Reservations, the Bar Harbor Water Company moved to prevent others from making similar development plans. The plan worked out by the two organizations was that the water company would finance the purchase of land it wished to protect, but that actual title would be placed in the hands of the Trustees. This formula was first implemented in July, 1910 when 75 acres on the Eagle Lake shore was purchased from Andrew Stroud Rodick.[83] The company approved similar purchases of six lots in January 1911, including the purchase of the Livingston property.[84] Thereafter, variations on this scheme were repeated numerous times.[85] By August 15, 1915, Fred Lynam was able to report to the stockholders that:

> "of the water shed of Eagle Lake there now remains in the hands of private owners only the Brewer Ice Company property, the use of which is necessary for icing purposes, the small tea house lot owned by John Rich, a small lot near the dam and the W. M. Roberts camp lot. None of these offer at present time any problems as to the purity of Eagle Lake Water. All are kept in the very best of condition."[86]

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[82]Hornsby, et. al., *Cultural Land Use Survey*, 125-126.

[83]Minutes of the Executive Committee Meeting July, 1910. Records Book 2:246-247.

[84]Minutes of the Executive Committee Meeting January 6, 1911. Records Book 2:259-260.

[85]See Record Book 2: 277-278, Record Book 3: 1-11, 16-18, and letter from Fred Lynam to George Dorr dated March 15, 1915 appended to record book 3 before page 26.

[86]Annual Stockholders Report, August 3, 1915: 1. On File Bar Harbor Water Company.

Over the next few years, efforts nonetheless continued to acquire these last few parcels.[87]

In 1916, the Trustees land was turned over to the Federal Government to become Sieur de Monts National Monument. This became the core of what became Lafayette National Park in 1919. George Dorr, then a board member of the Bar Harbor Water Company, became the first superintendent of the new federal reservation.[88]

In 1927 and in 1930, the question of possible development on the Eagle Lake shore was raised again. In 1927, the issue was possible construction of carriage roads by John D. Rockefeller. After some discussion, the Water Company agreed that his would offer little threat to the water supply, and made no objection.[89] In 1930, the issue was again raised by plans presented by Rockefeller. Specifically, he now proposed to build a tea house and stables at the north end of the lake. The Bar Harbor Water Company had previously taken great pains to remove all buildings from the very area where Rockefeller proposed building, and it did object to his plans initially. However, it soon acquiesced. The company's ostensible reason for doing so was that the proposed sewage disposal system for the tea house included a sand filter, and because the runoff and effluent from the site would be directed into Duck Brook, downstream from the water companies intake pipe.[90] Though the Bar Harbor Water company approved

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[87]Annual Stockholders Report, August 7, 1917: 1. On File Bar Harbor Water Company; Annual Stockholders Report, August 6, 1918: 1. On File Bar Harbor Water Company. .

[88]Hornsby, et. al., *Cultural Land Use Survey*, 126.

[89]Minutes of the Directors Meeting July 17, 1928. Records Book 3:139. On File Bar Harbor Water Company. Also, see page Records Book 3:138.

[90]Notice attached to Records Book 3, page 161, date; Minutes of the Directors Meeting September 19, 1930. Records Book 3:162-163; Letter from A. A. Robertson, Bar Harbor Health Officer, to Dr. Ludwig Kast, Chairman of the Sanitary Committee, Village Improvement Society, dated September 1, 1931. Appended to Records Book 3:180; Deed and acknowledgment from the Bar Harbor Water Company to John D. Rockefeller, Jr. Dated September 8, 1932. Appended to Records Book 3:181; Letter from A. A. Robertson, Bar

Rockefeller's plans, it appears that the tea house, to be known as the Eagle Lake Lodge, was never built. Certainly, it never appeared on topographic maps of the 1930s or 1940s.

Second Period of Reconstruction, 1930-1940

Though regular maintenance of the water system had been ongoing since 1910, little new construction occurred. With the company's infrastructure problem's essentially solved and the future of the company's clean water supply insured, the decade of the 1920s was relatively uneventful. In 1921, the company further expanded its Hull Cove line to Salisbury Cove. This expansion was largely driven by the needs of the Mount Desert Island Biological Laboratory in Salisbury Cove. To provide adequate water pressure to the new line all summer long the company built a 47,000 gallon standpipe on Ireson Hill.[91]

By 1930, however, some facilities were falling into obsolescence and the company renewed its construction program. In particular, two related construction projects were carried out at New Mills Meadow, where the 20" and 16" pipe from Eagle Lake joined the 20", 14", and 12" pipes leading into town. For one thing, the company was finding that the nearly thirty year old sand filter system was demanding considerable upkeep. Over the years, frost had heaved the walls requiring periodic repairs. The sand in the two filter beds needed periodic cleaning, supplementation, or replacement, and when underlying pipes needed service, the sand needed to be temporarily removed. Replacement of the sand in 1930 alone cost the company $4,000.

Harbor Health Officer, to Fred C. Lynam, dated October 4, 1932. Appended to Records Book 3:185.

[91]Minutes of the Directors Meeting September 8, 1921. Records Book 3:92; Annual Stockholders Report, September 1, 1922: 1. On File Bar Harbor Water Company.

In 1931, the company began making plans to retire the filter system. To prevent a recurrence of the bad odors and tastes that had led to its construction in the first place, the board now planned to add chlorine to the water.[92] A house for the chlorination machinery was built at New Mills Meadow. At the same time, the venturi meter, formally housed at the old stone tower, was moved to New Mills Meadow. These modifications were completed in late 1932 or 1933.[93] With abandonment of the sand filters, their lot was deeded to John D. Rockefeller Jr., who was then actively acquiring undeveloped land to be attached to the growing National Park, which was by then being called Acadia National Park.[94]

Immediately following completion of the chlorinating plant, the company undertook yet another construction project. The gate house at the Eagle Lake dam was nearly 40 years old and in disrepair. Work to replace it with a new brick gatehouse was started in 1933, and the new building completed in 1934.[95]

In about 1928, the company abandoned its reservoir on Great Hill.[96] Available records do not explain the reason, but the reservoir was presumably worn out, and possibly leaking

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[92]Minutes of the Directors Meeting August 4, 1931. Records Book 3:169. Letter from Fred Lynam to Dr. Ludwig Kast dated August 10, 1932. Appended to Records Book 3:178; Minutes of the Directors Meeting September 8, 1932. Records Book 3:179.

[93]Annual Stockholders Report, August 1, 1933: 1. On File Bar Harbor Water Company.

[94]Minutes of the Directors Meeting September 30, 1932. Records Book 3:182-183; Annual Stockholders Report, August 1, 1933: 1. On File Bar Harbor Water Company.

[95]Minutes of the Directors Meeting August 1, 1933. Records Book 3:193. Minutes of the Directors Meeting September 13, 1933. Records Book 3:194. Annual Stockholders Report, August 1, 1934: 1. On File Bar Harbor Water Company.

[96]Minutes of the Directors Meeting September 16, 1929. Records Book 3:153. The business of this meeting was to dispose of the reservoir lot, as it had been out of use for more than one year. The document actually says “filter lot” but this was clearly a mistake, as the company operated the filters for several more years. Confirmation that the reservoir lot was intended comes from the fact that George I. Riche was cited as the original owner of the parcel.

badly. The reservoir had certainly not outlived its purpose, however, as planning and construction of a new tank was built to fulfill the same function, to provide reserve capacity for periods of peak demand in 1935.

The new 500,000 gallon standpipe structure was an iron tank placed on Great Hill above New Mills Meadow (Figure 28).[97] The base of the standpipe was at an elevation of about 320 feet, well above the 275' elevation of Eagle Lake. Therefore, gravity would not fill the tank. For that, large electric pumps were installed in a wood addition attached to the three year old chlorination plant.

The reserve capacity offered by the tank was only required during periods of peak demand in the summer. During those times, the electric pumps would be turned on at night, filling the tank. During the day, water from the tank could run back into the system to bolster the supply to town. The standpipe was completed in 1936.[98]

The work carried out between 1933 and 1936 once again brought the system up to full operating condition. From 1936 to the present, there has never again been a period of such concentrated construction. In the 1950s, a regular program of pipe cleaning was instituted as a way to maintain the system in top performance. To this end, a new lime house was added to the New Mills Meadow pump house, and machinery installed to mix lime into the water. In 1963, after over ten years of discussion, the company began adding fluoride to the water. Again, an addition was made to the New Mills Meadow pump house to house the necessary machinery. In 1968, the company built a new steel standpipe. This structure was built at the south end of the

[97]Minutes of the Directors Meeting August 31, 1935. Records Book 3:213; Annual Stockholders Report, August 4, 1936: 1. On File Bar Harbor Water Company.

[98]Annual Stockholders Report, August 2, 1937: 1. On File Bar Harbor Water Company.

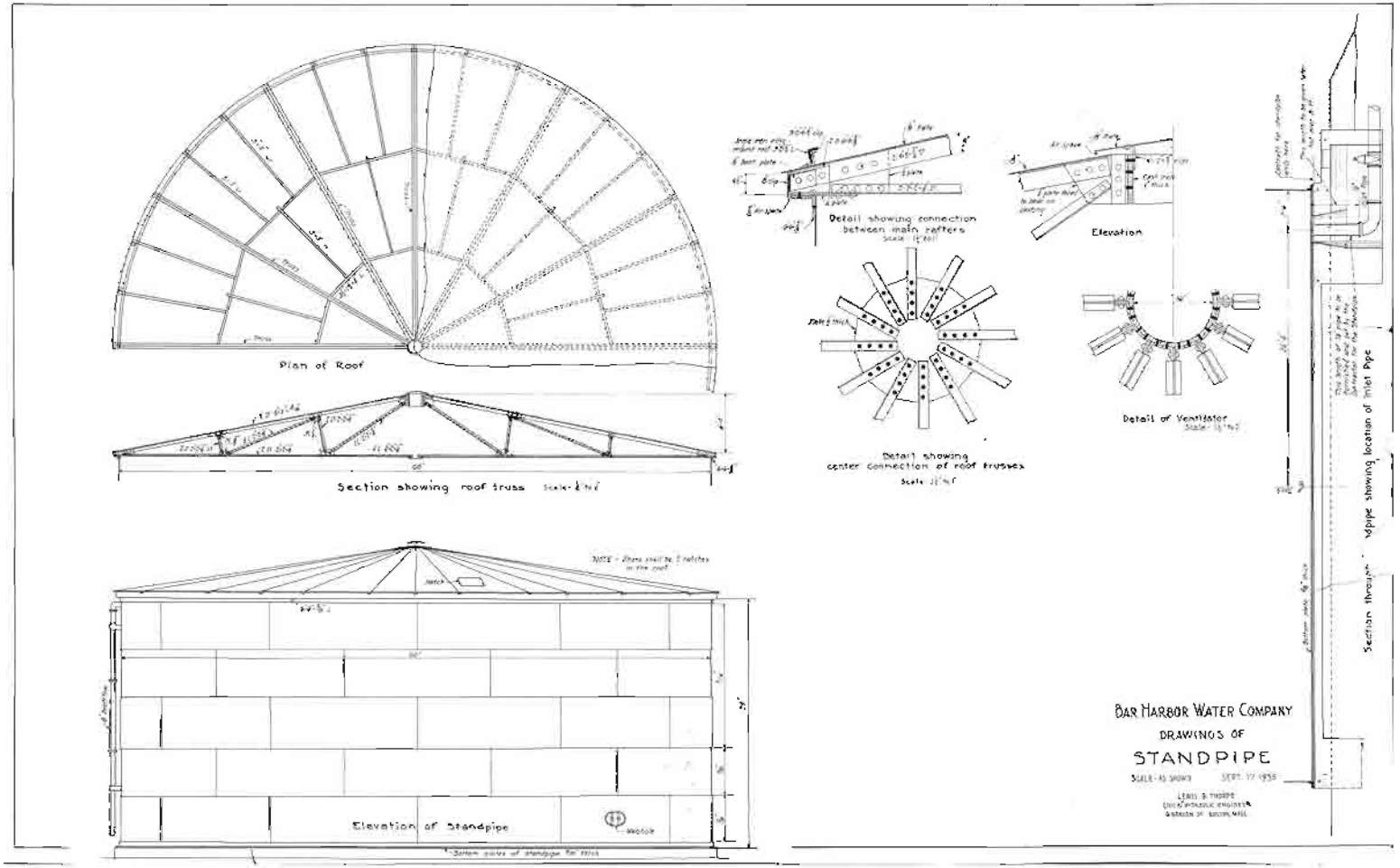

Figure 28. The 500,000 gallon iron tank was started on Great Hill above New Mills Meadow in 1935 and completed in 1936. The tank replaced an earler 700,000 gallon open concrete and stone reservoir lower on the hill, which was abandoned some seven years earlier. Courtesy of the Bar Harbor Water Company.

system specifically to insure an uninterrupted water supply for the expanding Jackson Laboratory. In 1991, the company expanded its Eagle Lake gate house. Under orders from the State Board of Health, this alteration was needed so that the chlorination plant could be moved to the head of the system. This alteration insures longer contact between the chemical and the water before it reaches town.

In 1997, the 12" iron Duck Brook line, dating from 1884, was abandoned. It was replaced by a 12" welded polyethylene pipe, which like its predecessor, lies on the surface. In 1998, the 24" intake pipe was extended an additional 125' into Eagle Lake, again using modern polyethylene pipe. Most recently, in 2001, a 500,000 concrete tank was built near the 1935 tank at New Mills Meadow. The purpose of this tank is to increase the contact time between the chlorine and water to fullfill regulations for unfiltered water systems.

Perhaps the most far-reaching change in the company's operation of the last 100 years, came in the year 2000. In that year, the company saw its second major change in ownership and management. After operating for 126 years, the privately owned company was purchased by the inhabitants of Bar Harbor, making it a Town owned and operated entity. This time, there would be no question but that the company would be a locally operated concern.

CHAPTER 5

CONCLUSION, SIGNIFICANCE, AND RECOMMENDATIONS

Over the years, expansion of the Bar Harbor water system occurred in discreet phases (Figure 29). In the twenty years that Fountain and Serenus Rodicks were principally responsible for the company, construction took place in repeated episodes, in 1874-1877, 1881, 1884, and 1887. Under the new management installed in 1893, there was a rather prolonged period of construction, from 1893-1909, with a brief hiatus in the period 1898-1900. After 1909, operation of the company settled into a routine of maintenance. Only occasionally, did the company undertake major new construction, in 1921, 1932-1936, 1968, and 2001.

Given the amount of activity that occurred early on, it is that part of the company's history that is most dramatic. In terms of engineering, Fountain Rodick's 1887 acknowledgment that he did not generally employ professional engineers is reflected in the amount of construction that the company undertook in the 20 years that years that he and his brother Serenus led the company. Yes, the system's rapid expansion was needed to keep apace the growth of the town it served, but by 1893, the company had already built and abandoned three successive reservoirs. Had the Rodicks planned the system at the outset, taking into account such things as the probable continued growth of the town, they might have built a system that did not become repeatedly obsolete in a few short years. A concrete result of the Rodick's do-it-yourself approach to hydraulic engineering is that the Duck Brook watershed is littered with the ruins of their successive experiments. Probably none of these features were "state of the art" in their time, but they all make visually impressive ruins today.

The long controversy between the Bar Harbor Water Company and its clients, culminating in its take over in 1893, represents another dramatic episode in the company's

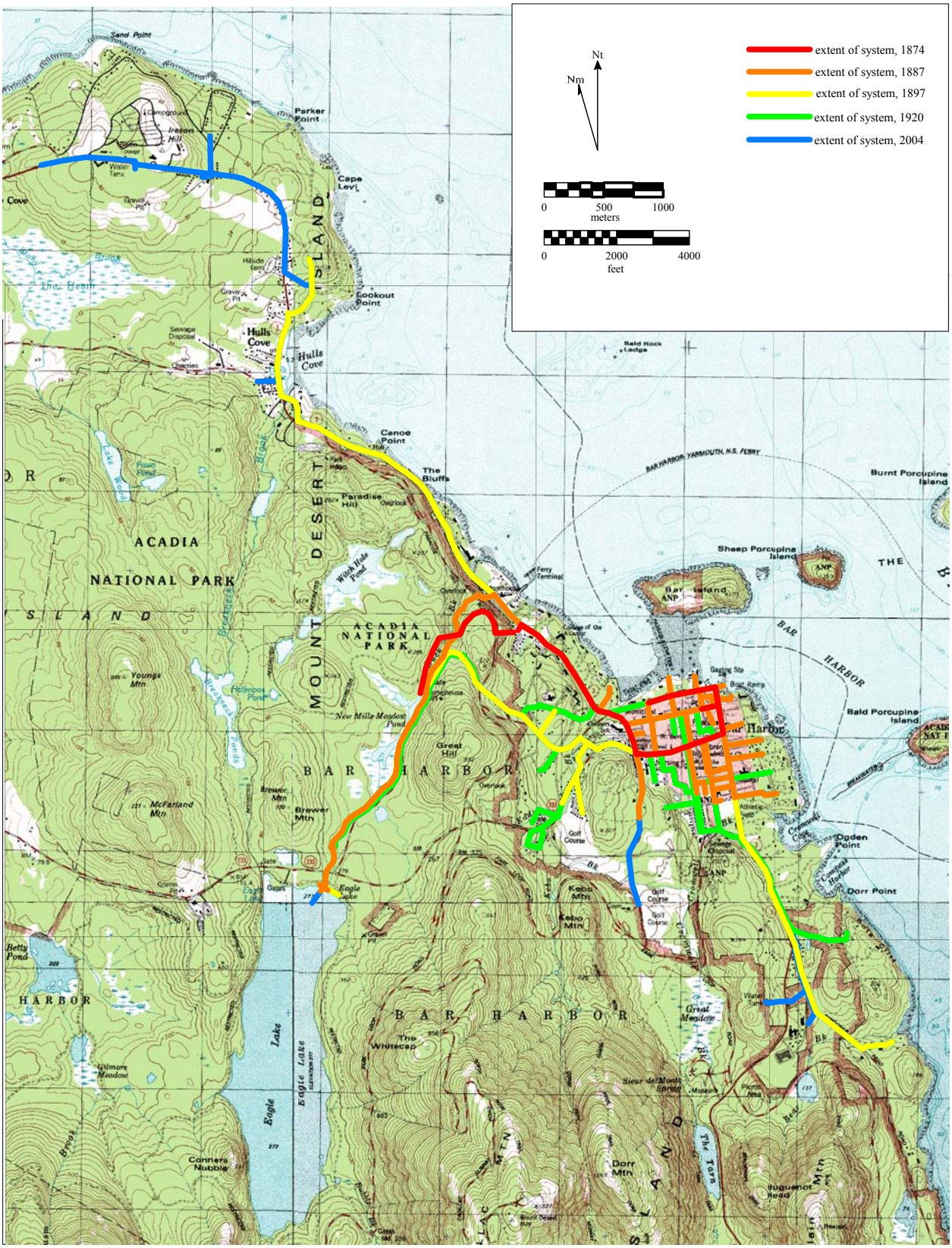

Figure 29. Expansion of the Bar Harbor water system, 1873 to 2004. Colors reflect the extent of the system in 1874, 1884, 1887, 1897, 1920, and 2004. The earliest periods of expansion are represented by colors at the red end of the spectrum. Later periods are represented by colors that are progressively farther to the blue end of the spectrum.

history. Richard Hale saw this fight as a triumph for the Rodicks. By extension, he said, it demonstrated that control of Bar Harbor would remain firmly in the hands of the long-time residents, in spite of the efforts of the wealthy cottagers to determine the town's future. Apparently, Hale was unaware of the numerous ties between the management that took over the company in 1893 and that of the Eden Water Company. The Rodicks had, in fact, lost to these summer-only residents. If we extend the conclusion in the way Hale did, then perhaps the episode established that the long time residents were not to retain control over their town's future, at least through the remainder of the nineteenth century and into the twentieth century.

In contrast to the Rodick's earlier management style, the new management undertook a planned program of expansion that took into account the immediate water needs of Bar Harbor as well as the potential future needs. To this end, they regularly employed a professional civil engineer to plan and design new works. One result is that the major facilities built after 1893, the Great Hill Reservoir and the filters, were made in whole or in part of concrete. Both features functioned for a far greater time than the stone dams, standpipe, and reservoirs built under the direction of Fountain Rodicks.

At the time that the Bar Harbor Water Company was organized in 1873, few other such companies existed in the state. The Portland Water Company was organized in 1862 and began piping water from Sebago Lake in 1869. The Augusta Water Company was chartered in 1870. The Lewiston Water Company was founded in 1873, one year prior to the Bar Harbor Water

Company.[99] This trickle of water company charters continued through the 1870s. Then, in the 1880s, the flood gates were opened and dozens of new systems were created.

Maine appears to have lagged slightly in the development of public water systems, nationwide. Philadelphia had the first public water system. It was designed and built by architect Benjamin Latrobe in 1799 and used bored wooden pipes and steam-driven pumps.[100] The Newark Aqueduct Company began preparing a water system for Newark, New Jersey in 1800, and was using iron pipe by 1828.[101] New York City had public water by 1842, and Boston by 1848.[102] By 1870, over 130 large and small public water systems were operating in the United States.[103]

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[99]For comparative information concerning water companies, a search was made on the internet. Thus, only water companies with a presence on the web were found, and it is possible that other early systems existed in the state, possibly even before Portland's system was founded. Portland Water District "Portland Water District History," http://www.pwd.org/about/history.php 1/6/2005); "History of the Augusta Water District from the 1949 Annual Report," *Web page of the Augusta Water District* http://www.augustawater.org/history49.htm 1/6/2005); Douglas I. Hodgkin, "The Growth of a City: A Brief History of Lewiston," City of Lewiston Web Page http://ci.lewiston.me.us/history/ 1/6/2005.

[100]Jim Murphy, *An American Plague: The True and Terrifying Story of the Yellow Fever Epidemic of 1793*, (New York, Clarion Books, 2003), 107-108; William James, *A Historical Perspective on the Development of Urban Water Systems*. James is a Professor of Water Resources Engineering, University of Guelph, Guelph, Ontario, Canada. N1G2W1. This site is a compendium of Professor James' lecture notes.

[101]No Author. *History of the Newark Water System*. http://www.ci.newark.nj.us/Water/waterhistory.htm

[102]James, *A Historical Perspective on the Development of Urban Water Systems*, http://www.eos.uoguelph.ca/webfiles/wjames/homepage/Teaching/437/wj437hi.htm; No Author, *Chestnut Hill Reservation History*, Massachusetts Department of Conservation and Recreation Web Site, http://www.mass.gov/dcr/parks/metroboston/chesHistory.htm

[103]Ellen L. Hall, and Andrea M. Dietrich "A Brief History of Drinking Water," Web Site of the State of Rhode Island Water Resources Board, http://www.wrb.state.ri.us/programs/eo/historydrinkingwater.htm. Reprinted from *Opflow*, Vol. 26, No. 6 (June 2000).

Though the exact impetus varied from place to place, the principal reason for establishing water systems was to provide potable water that was separated from waste water. Often, such systems were founded as a direct result of a disease outbreak in a given locality, just as was the case in Bar Harbor. Philadelphia's system was created in direct response to the yellow fever epidemic that hit that city in 1793. Bangor's system, created in 1875, was in response to typhoid. Indeed, the claim has even been made that the success of such water systems and the parallel success of sewage systems, has done more to increase the average life expectancy in modern society than any other single cause.[104]

The historical significance of the Bar Harbor Water Company, then, is not that it is the first water system, though it is an early one within Maine, nor the sensational impetus for its formation. What is important about the Bar Harbor Water Company is its specific critical role in the success of Bar Harbor as one of Maine's most important tourist destinations and its close connection to the early growth of Acadia National Park.

Furthermore, the fact that Acadia National Park later expanded to encompass a substantial part of the Bar Harbor water system means that the relics of the system are preserved. Perhaps nowhere else is there such a concentration of water system features documenting the technological development of such a work.

Thus, it is believed that the Bar Harbor water system is eligible for listing on the National Register of Historic Places under criteria A, as it clearly is "associated with events that have made a significant contribution to the broad patterns of our history," and it retains substantial integrity in a way that this history can be experienced. Such a listing would best be carried out in the form of a Historical District.

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[104]James, *A Historical Perspective on the Development of Urban Water Systems*.

The lead abatement program for the abandoned 12" Duck Brook line will clearly affect a contributing element to such a District. As discussed in Chapter 1, the MDEP is currently considering abatement options. Without making considerations for the engineering difficulties or environmental benefits, the best abatement option for the historical property would be one that leaves the 12" pipe intact and in place.

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