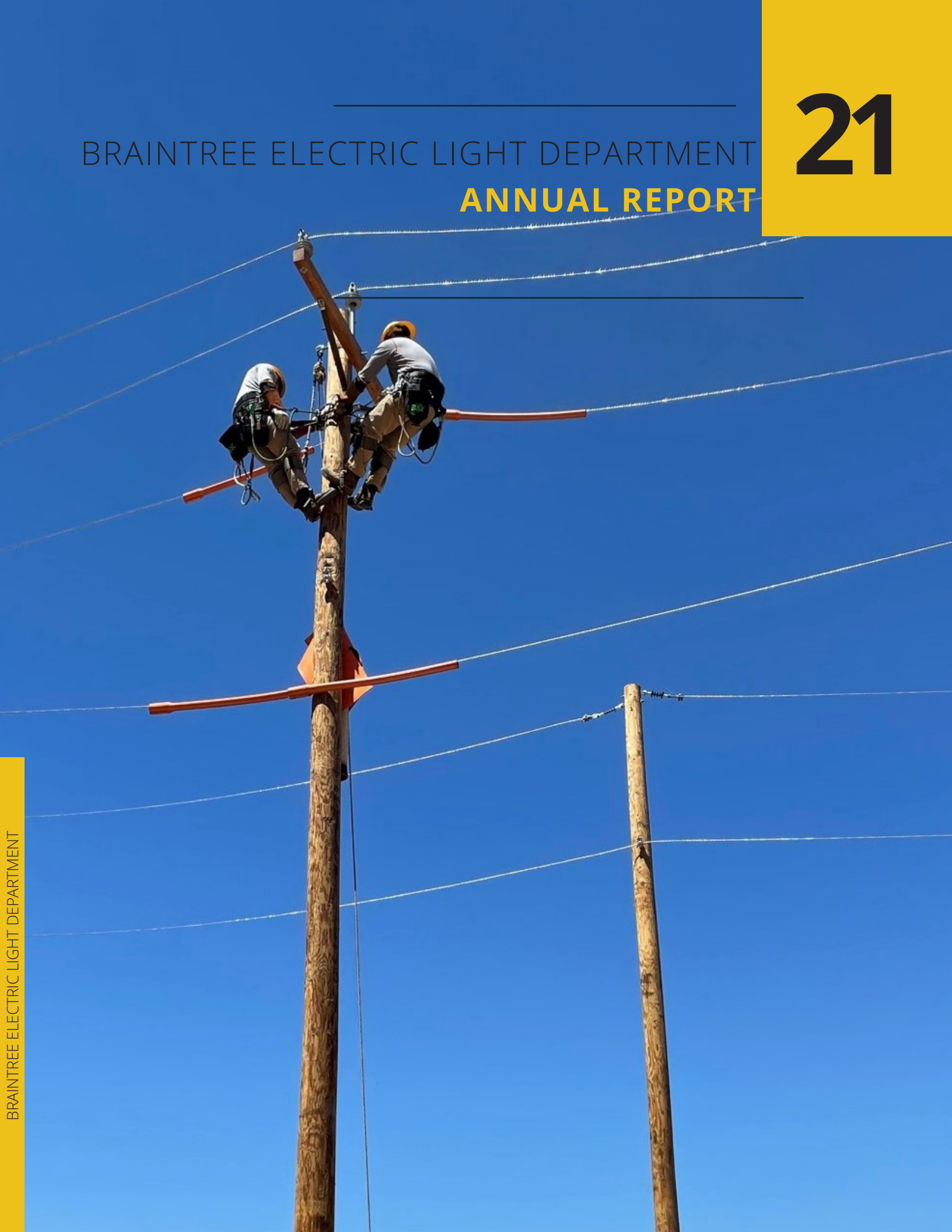
BRAINTREE ELECTRIC LIGHT DEPARTMENT

21

ANNUAL REPORT



BRAINTREE ELECTRIC LIGHT DEPARTMENT

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LIGHT DEPARTMENT

150 POTTER ROAD

BRAINTREE, MA 02184

BRAINTREE ELECTRIC LIGHT DEPARTMENT

MESSAGE FROM **THE GM**

William G. Bottiggi

2021 came with some big changes for Braintree Electric Light Department; it was a year of transition. We transitioned back to our roots, successfully negotiating and completing the sale of our Internet business to Comcast on December 1, 2021. Now we are 100% focused on what Thomas Watson founded back in 1891—lighting up Braintree!

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Of course, keeping a hometown Internet service option would have been ideal, but the sale was in the best interest of the residents and BELD alike. Continuing in the Internet business meant we would have had to invest approximately $7 million dollars into our core network just to keep it on par with today's technologies. With Comcast and Verizon constantly investing in their infrastructure, offering direct competition in Braintree, and BELD having only 2,500 (less than 20% of the town) core customers, we could not justify the investment, nor the inevitable rate increases to the town.

We worked very closely with Comcast, making every effort to ensure the transition for all our customers to a new provider was as seamless as possible. We made sure Comcast had comparable rates or even better packages than we were currently offering. We walked all customers through the transition process right up until the final customer was converted to their new provider. A lot of hours and hard work was put in by BELD employees, but we are happy to say the transition couldn't have been any smoother for residents, and some of them gained services and are saving money each month.

On the electric side of things, we had a very successful year. Our electrical sales and load grew during 2021 as businesses returned to work after putting the pandemic behind them. Our electrical distribution system held up very well over the winter and throughout most of the year. We had one major storm in October that caused more outages than we would normally experience. It was a worst-case scenario with lots of rain softening up the ground and heavy leaves still on the trees. Those elements combined with high winds equaled several trees coming down and taking several utility poles and electrical lines with them. Even with those extreme conditions we were able to restore power within a few hours for most customers and a few days for those that were hit the worst.

On the electric side of things, we had a very successful year. Our electrical sales and load grew during 2021 as businesses returned to work after putting the pandemic behind them.

Looking forward to 2022 our focus is on continuing to invest in our electric distribution, transmission, and generation systems. After 12 years of operation the time has come to send our gas turbines out for overhauls. These turbines will be trucked one at a time to Montreal where Siemens Energy will disassemble, inspect, and rebuild the gas turbines, renewing them for another 12 to 15 years.

Finally, in case you haven't been paying attention, the push is on to electrify home heating and transportation. BELD has been encouraging the use of electric vehicles for a few years and is now offering customers incentives to install heat pumps as replacements for their oil and natural gas heating systems. If anyone is interested in learning more about these products, please visit www.beld.com.

WILLIAM G. BOTTIGGI
General Manager

MUNICIPAL LIGHT BOARD
2021

BELD'S THREE-MEMBER BOARD IS CHARGED WITH OVERSEEING THE STRATEGIC DIRECTION OF THE LIGHT DEPARTMENT

THOMAS J. REYNOLDS
CHAIRMAN

ANTHONY L. AGNITTI
VICE CHAIRMAN

JAMES P. REGAN
SECRETARY

MUNICIPAL LIGHT BOARD EST. 1909

BELD is governed by an elected Municipal Light Board that appoints a General Manager. BELD's three-member Board is charged with overseeing the strategic direction of the light department.

BELD was established in 1892. The plant operated under the jurisdiction of the Selectmen until 1909 when the growing importance of electricity made a separate Municipal Light Board necessary. The following year, the Electric Light Department boasted 908 customers, and was more than self-sustaining financially.

The Municipal Light Board meets monthly at BELD's administrative offices.

These meetings are always open to the public; Braintree residents are encouraged to attend these meetings.

MUNICIPAL LIGHT BOARD
MEMBERS LISTED BY SEAT THROUGHOUT THE YEARS

CHAIRMAN

1909–1956 Norton P. Potter
1956–1960 James H. Dignan
1960–1961 Raymond A. Nagle
1961–1967 Ernest S. Reynolds
1967–1968 Gordon E. Trask
1968–1974 William J. Dignan
1974–1977 Anthony J. Mollica
1977–1983 Dennis M. Corvi
1984–1993 Joseph W. Aiello
1993–1999 James M. Casey
1999–present Thomas J. Reynolds

VICE CHAIRMAN

1909–1938 Alexander Carson
1938–1957 Shelley A. Neal
1957–1983 Walter J. Hansen
1983–1989 Michael J. Joyce
1989–1995 James E. Wentworth
1995–1995 Paul E. Caruso
1995–2004 Darrin M. McAuliffe
2004–present Anthony L. Agnitti

SECRETARY

1909–1925 Charles T. Crane
1925–1936 Charles G. Jordan
1936–1954 Frank P. Lloyd
1954–1955 Ernest T. Fulton
1955–1980 Carl W.R. Johnson
1980–1981 Guy F. Luke
1981–1982 Joseph W. Aiello
1982–2006 Guy F. Luke
2006–present James P. Regan

FINANCIAL REPORT
BREAKDOWN 2021

ASSETS AND DEFERRED OUTFLOWS OF RESOURCES

		2021
CURRENT ASSETS Funds on Deposit with Town Treasurer	Operating Fund	$8,226,208
	Customer Accounts Receivable, Net	3,288,374
	Accounts Receivable - Related Party	66,182
	Other Receivables	1,160,530
	Unbilled Revenue	3,367,687
	Materials and Supplies	4,776,200
	Purchased Power Working Capital	5,275,020
	Prepaid Expenses	720,188
	TOTAL CURRENT ASSETS	26,880,389
NONCURRENT ASSETS Funds on Deposit with Town Treasurer	Depreciation Fund	8,918,390
	Rate Stabilization Fund	8,339,759
	Customer Deposits Fund	1,094,693
	Investment in Energy New England, LLC	2,477,418
	Other Investments	317,142
	Utility Plant Assets, Net	123,181,999
	TOTAL NONCURRENT ASSETS	144,329,401
	TOTAL ASSETS	171,209,790
DEFERRED OUTFLOWS OF RESOURCES	Deferred Outflows Related to Pension	4,134,131
	Deferred Outflows Related to OPEB	1,517,447
	Deferred Loss on Refunding	4,412,507
	TOTAL DEFERRED OUTFLOWS OF RESOURCES	10,064,085
	TOTAL ASSETS & DEFERRED OUTFLOWS OF RESOURCES	$181,273,875

LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION

		2021
CURRENT LIABILITIES	Accounts Payable	$ 5,095,925
	Accounts Payable - Related Party	353,949
	Accrued Compensated Absences	493,492
	Other Accrued Expenses	282,361
	Bonds Payable	7,802,637
	Participant Advances & Reserve	1,385,655
	Capital Leases	0
	Unearned Revenue	237,137
	TOTAL CURRENT LIABILITIES	15,651,156
NONCURRENT LIABILITIES	Bonds Payable, Net of Current Portion	46,008,369
	Capital Lease, Net of Current Portion	0
	Net OPEB Liability	2,201,169
	Net Pension Liability	18,922,208
	Customer Deposits	1,049,061
	Unearned Revenue	1,730,710
	TOTAL NONCURRENT LIABILITIES	69,911,517
	TOTAL LIABILITIES	85,562,673
DEFERRED INFLOWS OF RESOURCES	Contribution in Aid of Construction, Net	1,047,209
	Rate Stabilization Reserve	12,749,374
	Deferred Inflow or Resources Related to OPEB	1,286,895
	Deferred Inflow or Resources Related to Pension	5,314,884
	TOTAL DEFERRED INFLOWS OF RESOURCES	20,398,362
NET POSITION	Net Investment in Capital Assets	69,370,993
	Net Position Restricted for Depreciation	8,918,390
	Unrestricted Net Position	(2,976,543)
	TOTAL NET POSITION	75,312,840
	TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION	$181,273,875

CONSOLIDATING STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

		Consolidated
OPERATING REVENUES	Sales to ultimate customers	$49,143,061
	Sales for Resale	12,887,564
	Other Operating Revenues	1,860,852
	TOTAL OPERATING REVENUES	63,891,477
OPERATING EXPENSES	Purchased Power	22,449,978
	Fuel for Generators	2,108,160
	Maintenance	9,293,255
	Distribution & Transmission	2,347,042
	General & Administration	9,664,419
	Depreciation Expense, Net or Amortization	7,866,387
	TOTAL OPERATING EXPENSES	53,729,241
	OPERATING INCOME	10,162,236
NONOPERAT-ING REVENUES (EXPENSES)	Investment Loss - ENE	128,539
	Interest Income	9,041
	Insurance Income	0
	Gain on Sale of Internet Assets	1,000,150
	Interest Expense, Net of Premium Amortization	(1,763,312)
	TOTAL NONOPERATING REVENUES EXPENSES	(625,582)
	Income Before Contributions and Transfers	9,536,654
	NET POSITION - JANUARY 1	67,388,811
	Transfers Out - Payment in Lieu of Taxes	(1,612,625)
	NET POSITION - DECEMBER 31	$75,312,840

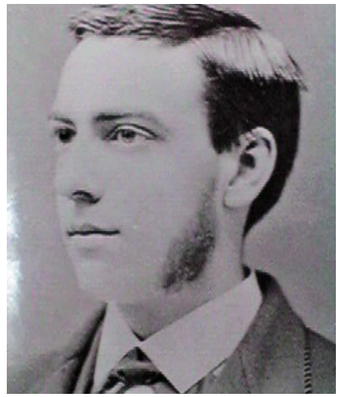
STATEMENTS OF KILOWATT HOUR SALES

		2021	2020
KILOWATT HOUR SALES	RESIDENTIAL SERVICE	118,768,238	119,809,135
	COMMERCIAL SERVICE	169,573,926	166,531,764
	INDUSTRIAL SERVICE	17,339,178	13,470,772
	MUNICIPAL SERVICE	12,299,997	11,859,245
	AREA LIGHTING	969,714	967,509
	SALES TO OTHER UTILITIES	15,969,283	14,486,810
	TOTAL KILOWATT HOUR SALES	334,920,336	327,125,235
REVENUE	RESIDENTIAL SERVICE	$17,015,597	$17,122,056
	COMMERCIAL SERVICE	$26,374,630	$25,424,136
	INDUSTRIAL SERVICE	$2,374,605	$1,850,926
	MUNICIPAL SERVICE	$1,925,870	$1,910,184
	AREA LIGHTING	$117,899	$117,790
	SALES TO OTHER UTILITIES	$12,887,564	$11,636,570
	TOTAL KILOWATT DOLLAR SALES	$60,479,165	$58,061,662

THOMAS A. WATSON

THE FOUNDER OF BELD

An abundant life



Thomas Augustus Watson was the founder of BELD. Known as co-inventor of the telephone, Watson was also a leader in Braintree public education.

Thomas Watson was born Jan. 18, 1854 in Salem, Massachusetts, son of a livery stable foreman and thrifty housewife. Victim of an educational system that failed to captivate the intelligent young Watson while offering few skills beyond reading, he left school as a teen to work mostly in the retail trade.

But it was at Boston's Scollay Square District shop of Charles Williams that 18-year-old Watson learned to make telegraph and fire alarm equipment. He was rated as a skilled mechanic by the end of his second year on the job and soon was called upon by hopeful inventors to construct electrical equipment.

Soon thereafter in 1874, Watson met Alexander Graham Bell, then a young Boston University professor looking for help with his "harmonic telegraph." Bell felt the machine could send more than one message over a wire simultaneously.

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On March 10, 1876, A wire ran between two rooms at 5 Exeter Place in Boston. While Watson waited in Bell's bedroom with his ear pressed to the receiving telephone, he was surprised to hear Bell's voice coming from it saying, "Mr. Watson, come here, I want you!" Watson dashed down the hall and found that Bell had upset one of the acid containers and the liquid spilled on his clothes. The accident was quickly forgotten when they realized the telephone had at last spoken.

With all the publicity and popularity of the new invention, it was fortunate that Bell's associate Gardiner Hubbard had filed the patent application. U.S. Patent No. 174,465, generally considered the most valuable patent ever issued, was granted to Bell on March 7, 1876, three days before the first transmission of the first intelligible sentence.

Watson was very busy for the next four years. He designed and improved early transmitters and receivers, and issued instruction books to licensees describing how to use the equipment. He testified in many legal suits, made trips to inspect installations, and continued to work on improving the equipment.

Between 1877 and 1881, Watson filed applications that resulted in about 40 U.S. patents. In the spring of 1881, Watson resigned his position with the Telephone Company. By this time, 50,000 Bell telephones existed in the United States. Watson's telephone career was over at age 27, his interest diminished now that the pioneer work was completed.

Watson moved to a 60-acre farm in East Braintree in June 1883 with his bride, the former Elizabeth Seaver Kimball of Cohasset. The farm featured a half-mile frontage along the Weymouth Fore River, an arm of the sea.

A friend told Watson about a new rotary steam engine that needed a machinist's skills. Watson hired young machinist Frank O. Wellington to help him on the project, which was completed in the spring of 1885. The steam engine failed, however, and desiring to keep the machine shop open and Wellington in his employ, Watson decided to build marine engines for yachts and tug boats. The Fore River Engine Company was born and Watson brought Wellington on as a business partner.

While expanding his ship-building business Watson became a central figure in important town issues, namely creation of a municipally owned electric light company and improving the public school system.

Several years later, after the battleship Maine was sunk by an explosion in 1898, the U.S. Navy gave the Fore River Engine Company a contract to build two 400-ton torpedo boats, the Lawrence and the McDonough. In November a year later, Watson's shipyard won the contract for the 3,000-ton cruiser the DesMoines, primarily because earlier that year Watson had purchased a 100-acre site of waterfront land at Quincy Point on the Fore River, where the Fore River Shipyard operated until 1986.

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Watson was appointed in 1890 to serve on a special committee to examine school building plans. He later became a member of the school committee in 1892, serving through 1910. During that time, he promoted construction of new and better school buildings to meet state standards. He also favored adding new subjects to the traditional curriculum such as sewing, cooking and carpentry. The town opened a night school in 1911.

The town benefited from Mr. and Mrs. Watson's keen interest in kindergartens. The couple fitted up the machine shop on their property, hired a teacher, and opened a kindergarten for 12 neighborhood children. It proved such a success that the town opened kindergartens in all sections as part of the regular school system, becoming the first municipality in New England to do so.

Watson's generosity to Braintree's public schools was legendary. At his own expense, he would sometimes hire an instructor in a special field - such as voice, culture or geology - to give special instruction to the town's teachers. To keep a top-notch teacher in the town's school system, which saw a consistent turnover because of poor pay, Watson would supply the teacher the difference in salary out of his own pocket. He also gave collections of rocks and minerals he had collected to Braintree schools.

In 1891, the moderator of Braintree's Town Meeting appointed a five-member committee to study the feasibility of bringing electric lighting to the town. As chairman of that group, Thomas A. Watson began compiling information on the subject. The committee reported back that Braintree was the only town along the Old Colony Railroad route from Boston to Scituate that did not have streetlights. Lack of electric lighting, the committee found, was the only negative to Braintree's continued expansion and development. It said the cost of a lighting system was a good investment, "sure to return dividends in increase of population and value of real estate."

On Oct. 29, 1891, voters concurred with Watson and his committee by a margin of 146-5 in favor of constructing Braintree's electric plant. For $750 the town bought a large lot on Allen Street in East Braintree

The committee suggested that Braintree's street lamps operate from dusk until midnight, 25 nights a month, because the moon would provide light during the remaining nights. Watson's supplementary report on supplying electricity to workshops, stores and houses was initially greeted with lack of enthusiasm from town residents.

The committee also considered the town owning its own generating plant. "There are many reasons why in our opinion it is better for a town to own and operate an electric plant," Watson summarized, "but the chief reason is that a town can supply itself with light from its own plant cheaper than it can buy light from any company." Watson was the founder of a group Nationalists, who sought to promote public ownership and operation of all industries. It was largely through lobbying efforts by the Nationalists that the state Legislature in 1891 approved a bill allowing municipalities to establish their own electric light systems—the birth of public power in America.

On Oct. 29, 1891, voters concurred with Watson and his committee by a margin of 146-5 in favor of constructing Braintree's electric plant. For $750 the town bought a large lot on Allen Street in East Braintree, located on the Fore River where it could be reached by coal schooners. The first estimate for constructing a generating plant was $25,000, which included a building with a brick chimney, dynamos and equipment to furnish 100 arc lights, a steam plant, poles, wires and 90 lamps installed and ready to operate.

With Watson as chairman of a committee constructing the electric light system, by Oct. 14, 1892, operations began with two arc light machines capable of powering 50 street lamps each. Residents of Braintree quickly realized the advantages of electricity once the streetlights were in operation.

Operating from 4 p.m. to 8 a.m., commercial and domestic lighting equipment was added to the plant at a cost of $16,500 in April 1893. The town's total investment was gradually paid back from Electric Light Company earnings. Watson agreed to serve as first manager of the Electric Light Company, but refused to accept money for his services.

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The plant operated under the jurisdiction of the Selectmen until 1909 when the growing importance of electricity made a separate Municipal Lighting Board necessary. The following year, the Electric Light Department boasted 908 customers, and was more than self-sustaining financially. As technology improved, the arc streetlights were gradually replaced with tungsten incandescent lights, with the last substitution completed in 1911.

In the next few years electric demand increased as consumers learned to enjoy the convenience of such innovations as electric water heaters and stoves. At the same time, sound financial management allowed BELD to proudly become the only plant in the state without debt. And when shortages and high costs made coal impractical to burn, the plant added two new oil-fired boilers in 1921.

Watson continued to expand his interests, even in his later years. He joined a company of touring Shakespearean players after taking theater classes at London University. He also gave public readings of the Bible, Greek drama, Browning and various American authors. In 1919, he received a master of arts degree from Union College and in 1921, a doctor of engineering degree from Stevens Institute of Technology. Watson completed his autobiography in 1926, entitled Exploring Life. At the age of 77, Watson took up art, studying under Professor Benedictis of Boston.

He died Dec. 13, 1934 at his winter home on Pass-Grille Key, Florida. He was survived by a daughter, Esther Watson Tipple, who was also survived by a daughter, Mary Tipple Cobb.

An editorial in the Dec. 28, 1934, edition of the former Braintree Observer said: "Mr. Watson lived a life replete with study, experiment, research, investigation, writing, speaking, action, in industry, education, art, science and philosophy. Truly, he lived 'the abundant life.'

2021

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