



**Berlin Water Works**  
**September 2021**

Water Commissioners for this report period were Michael Caron, Paul W. Poulin, Sean Brungot, and Paul Ingersoll; Ex-officio member was Mayor Paul R. Grenier.

The Berlin Water Works (BWW) has not increased water rates in twenty-four years. BWW has been able to maintain water rates because of cross-training employees and elimination of work through planned improvements and the implementation of BWW “force account” construction to offset operating cost by performing capital improvement projects with BWW resources. Energy improvements including the Solar System at the BWW office and the Hydro at the Ammonoosuc Treatment Facility have also helped keep energy costs manageable. BWW signed a contract with Freedom Energy Logistics for nineteen months, beginning April 2019, with a fixed rate of \$0.0819/kWh. We have generated extra power with the Hydro at the Ammonoosuc Treatment Plant. We have received an Eversource Credits which are applied to the Eversource Demand Charge which will reduce our net charges for the next year.

The Berlin Water Commission is pleased to announce that through a partnership with Northway Bank we’ve been able to restructure and consolidate our remaining debt. This restructuring will allow us to not only reduce the time of payment, but will also save the Water Works and Berlin ratepayers almost half a million dollars over 10 years. We’d like to sincerely thank both the management of the Berlin Water Works and Northway Bank for making this restructuring possible. It should also be noted that with this debt restructuring we have reduced our overall debt by almost \$35 million since 1993. By taking these steps we have helped to ensure our long-term goal of providing our customers with a quality, reliable service at a reasonable rate for many years to come.

BWW continues to offer on line bill paying for customers. Approximately 1175 or 33.76% of our customers are registered to use the online billing service and a total of 528 or 15.17% are paperless. Also, the BWW has an auto-pay option for which 251 or 7.21% customers currently participate.

There are 3480 BWW accounts requiring metering and protective devices. BWW has installed 2410 backflow devices to-date at customer’s homes. BWW has installed 1997 radio read units to-date. BWW is currently upgrading old brass meters by replacing them with poly Sensus Iperl meters. FY2021 BWW replaced 33 meters. Of the total replaced, all were Sensus Iperl meters.

		FISCAL 2020	FISCAL 2021
Total Flow		596,098,106 gallons	613,242,670 gallons
Difference from previous year		2.9% decrease	17.2% increase
Gallons per Day		1.509 million gals/day	1.767 million gals/day
Frozen Water Calls - outside		1	2
Frozen Water Calls - inside		1	0
Number of main line breaks		2	1
Number of service line breaks		9	2

Berlin Water Works continued to pass the lead and copper water sampling compliance regulations set forth by the NHDES for the 11<sup>th</sup> consecutive round of testing. The State of NH Department of Environmental Services dropped the number of test sites required from 60 sample sites to 30 sample sites, and now to 20 sample sites. The overall average lead and copper sample levels have dropped to new low levels. Please note that the water leaving the Water Treatment Plant is free of lead and copper and that the resulting lead and copper are attributed old portions of the distribution system, customer pipe systems, and/or dead-end lines. Water sampling will continue to monitor lead and copper levels. The next round of testing is scheduled for September 2022.

Water Quality Report for calendar year 2020 was distributed to all water customers as a bill stuffer in the May 2021 Billing. Paperless customers received an internet address to view the Water Quality Report on the City of Berlins website.

Berlin Water Works has been awarded a contract from the US Department of Justice - Federal Bureau of Prisons, Federal Correctional Institution - Berlin for the continuation of Water Utility Services. The superintendent signed the award letter, and this is a formal contract that BWW will provide water services for another ten years. The effective date of the award was May 1, 2020 through April 30, 2030.

Vachon Clukay & Company, PC was accepted by the Board to perform the Water Works financial reports for periods FY2018 thru FY2021. Our FY2022 budget of \$2,771,563 was presented by the Board on May 26, 2021 at the public budget hearing. The proposed budget was approved June 16, 2021. This budget represents the twenty-fourth consecutive year with no water rate increase for its customers.

### **IMPROVEMENT PROJECTS:**

A \$1,500,000 NHSRL #12 was awarded to BWW on November 22, 2017. The proposed work is to continue planned water main replacement of vintage 1890 through 1930's unlined 6" and 8" diameter cast iron pipe. The water main replaced will be the highest failure rate water main in the BWW Distribution System based on our records. Running water Customers have been addressed also by lowering and insulating service lines to prevent freezing. At one time there was over 1,100 running water services, we have now eliminated all early running water customers. Most of the proposed scope streets have stamped design drawings from previously funded projects. BWW has completed water main work on Twelfth Street from Sweden Street to Nansen Street. Willard Street between Hillside Ave and School Street. High Street between Emery Street and Pleasant Street. Western Avenue from Gerrish Street down toward Mink Street. And on Goebel Street from Devens Street to Alpine Machine. BWW has closed out SRL #12 and has begun BWW funded Capital Improvement Projects. That includes water main work on Denmark Street from Eighth Street to Johnsons Lane and BWW has also begun work on River Street from Madison Avenue to Jasper Street. BWW does all of our construction in house for an additional savings of cost per foot than the going rate for a contractor.

Brown Farm Well #2 was completed by Layne Christensen Company, the 10-day pump test was completed and the VFD is installed and the instrumentation is complete. The Water Conservation Plan was approved by the State, this has been a long process but we have been granted waivers. On June 17<sup>th</sup>, 2019 BWW received a letter from Kelsey Vaughn, NH Water Conservation Program/Drinking Water & Groundwater Bureau stating that DES approved the exemption request. Also, NHDES approved the meter maintenance schedule proposed by BWW. The calibration of the Venturi meter will need to be done electronically each year and the cleaning of the meter will need to be inspected in 20 years. BWW was notified by Andrew Koff that NHDES approved the Large Groundwater Withdrawal Permit; the well connection was approved by Randall Suozzo of NHDES. Brown Farm Well #2 is permitted for withdrawal of 700GPM. Well #1 and #2 are permitted for withdrawal of 1100GPM when both are running simultaneously.

The Ammonoosuc Treatment Facility underwent a massive PLC and Computer Upgrade, which is the brains that run our treatment plant. The old system was becoming obsolete and was 26 years old. The work was completed by Electrical Installations, Inc. The total cost of the upgrade was \$128,786.50. The plant

was able to stay online for the majority of the upgrade. It has now been successfully completed and is running well.

	Total as of FY 2021	FY 2020	FY 2021
Curb-to-curb street paving (includes overlay)	12.81 miles	.18	.11
Number of New Meters	3420 total in system	164	33
Number of New hydrants	424 total in system	1 New 1 Replaced	1 New 1 Replaced
Number of Replaced services	3420 total in system	10	24
New water main installed – since 1990	30.40 Miles	.14	.26

The BWW installed 1,371 feet of water main. Improvements to the water distribution in the City of Berlin continue with planned replacement of small diameter galvanized mains, which were all completed as of June 2019, and 1890 thru 1920's vintage unlined cast iron mains (21,388 feet remaining as of June 2021) with the highest frequency problems corrected first. As the streets for replacement of water mains are selected for design, improved fire protection flow capabilities are considered. The results of these increased efforts will be a much-improved distribution system.

BWW continues to record GIS location information for all new construction as well as completing the city a zone at a time.

Thanks to all BWB employees, Water Works Commissioners, the Honorable Mayor Paul Grenier, the City of Berlin and the NHDES Drinking Water staff for their continued support. The BWB has completed and is continuing work on significant improvements that will improve our water system and reduce our operating cost for many years into the future.

Craig P. Carrigan  
Superintendent