

September 2014

Berlin Water Works



Water Commissioners for this report period were Paul W. Poulin, Lucien F. Langlois, Michael Caron, David Bertrand and Paul Ingersoll; Ex-officio member was Mayor Paul R. Grenier. David Bertrand's term ended May 2014, Paul Ingersoll was appointed by Mayor Grenier to replace David Bertrand on the Board.

The BWW has not increased water rates in seventeen years. The NHDES 2012 Water Rate Survey was published and Berlin Water Works ranks 10th highest in the State for an average of \$595/per year per four person household. 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. The 55 Willow Street Office solar system has produced a 37% savings on electric bills. BWW also received a rebate of \$18,000 from the PUC for the solar system and we will be earning energy credits.

The 1994 and 1995 Bonds continue to be a major financial burden on the BWW's resources. The 1993 Bond was paid off in July of 2013. The 1994 Bond will be paid off in August 2014 and the 1995 bond will close in FY 2016. The availability of new low interest system improvement loans and grants has enabled the BWW to perform "Force account" construction work to improve our systems and balance the operation and debt budgets. In 2013, Berlin Water Works refinanced seven (7) NH State Revolving loans for a total savings of \$590,771.

BWW continues to offer on line bill paying for customers. Customers can pay their bills by going to the City of Berlin Website berlin.nh.gov. Invoice Cloud and Northern Data Systems are providing electronic bill presentment and online payment service. The system allows the office clerks to enter credit card payments for customers here at the office or over the phone. The system also allows customers to choose paperless billing. Approximately 521 or 12.8% of our customers are registered to use the online billing service. Also, the BWW has an auto-pay option for which 176 customers currently participate.

The Federal Prison Facility has been slowly increasing staff and inmate population. The water sales and revenue from the Federal Prison Facility has been lower than forecast and will not achieve forecast usage and revenue at operation.

There are 3400 BWW accounts requiring metering and protective devices. BWW has installed 1785 backflow devices to-date at customer's homes. BWW has installed 1101 radio read units to-date. BWW is currently upgrading old brass meters by replacing

them with Sensus Iperl meters. FY 2014 BWW replaced 86 meters of the total replaced 83 were Sensus Iperl meters.

BWW celebrated Drinking Water Week from May 5, 2014 to May 9, 2014 with open house at the Ammonoosuc Treatment Plant. Mayor Grenier signed a proclamation for Drinking Water Week. Superintendent Viens and Andy Sharpe of Provan and Lorber made presentations regarding the Berlin Water Works improvements at the New Hampshire Water Works Association (NHWWA) Exeter meeting in October 2013, and again at the New England Water Works Association (NEWWA) conference in Worcester, MA on April 2, 2104. At the New Hampshire Water Works Association (NHWWA) meeting in Wolfeboro on April 17, 2014, the BWW superintendent was presented with a “Meritorious Achievement Award”.

During the severely cold and long winter of 2013/2014, we had 124 people running water to prevent service line freeze-up. Some of these customers started running water on January 2, 2014 until shut-off on May 6, 2014. The balance of the 311 running water customers did not have to run the water in winter 2013/2014. BWW had one water main freeze on Jericho Road on April 7, 2014. We had 70 freeze-ups that required thawing. Of the 70 thaws, 46 froze curb to main, and 24 froze curb to house. We recorded 1 freeze-up inside thawed by property owner. Efforts continue to reduce the number of running water customers, of which there were 1003 of 3500 customers in the winter of 2000-2001.

	FISCAL 2013	FISCAL 2014
Total Flow	314,754,178	409,947,806
Difference from previous year	26% increase	30% increase
Gallons per Day	.862 million gallons	1.123 million gallons
Running Water Customers	17	124
Running Water Start - early	January 11, 2013	January 2, 2014
Running Water Start - regular	-	-
Running Water Finish	April 8, 2013	May 6, 2014
Frozen Water Calls - outside	6	70
Frozen Water Calls - inside	1	1
Hydrant Flushing	8/1/12 to 8/10/12	8/26/13 to 9/13/13
Number of main line breaks	5	3
Number of service line breaks	1	3

Our lead and copper water sampling program passed the last five rounds of testing in June of 2006, December of 2006, September 2007, September 2008, September 2009 and September 2012. The testing results from September 2012 showed all passed for copper and three failed for lead. The State of NH Department of Environmental Services dropped our tests required from 60 samples to thirty 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 2015. Water Quality Report for calendar year 2013 was distributed to all water customers as a bill stuffer in the May 2014 Billing. Paperless customers received an internet address to view the Water Quality Report.

The Ammonoosuc Treatment Facility developed a problem of too frequent backwashing and low finished water production. Blue Earth Labs was hired to review the process and test the beads and media. It was determined that the clarifier beads were not being cleaned adequately. The bead and media replacement or their cleaning by Blue Earth was costly. The BWW staff revised the cleaning process via researching the options available. Staff has completed the clarifiers and filters cleaning at the Ammonoosuc Treatment Plant and improved the system operation significantly. The plant operated at full design capacity of 1400 gallons/minute on February 18, 2014. BWW started the upgrade of SCADA PLC's to improve the distribution system control reliability.

The new Maintenance Garage compressed air distribution system was completed by BWW staff. All planned work inside the garage is now complete. BWW staff has also completed the installation of outside drain structures for the garage facility. Proposals are being reviewed for the proposed free standing and retaining wall near the new garage. Phase I roof repair at the Androscoggin Water Treatment Facility was completed. The work will be completed with Phase II which is planned for fall of 2014.

Melanson, Heath & Co PC was accepted by the Board to perform the Water Works financial report for period ending June 30, 2015 (FY2015). The FY 2013 was completed and FY 2014 is currently in progress. Our FY 2015 budget of \$3,580,639 was presented by the Board on May 28, 2014 at the budget hearing providing \$2,392,660 for operations and \$1,187,979 for water bond and loan debt payments. The proposed budget was approved June 25, 2014. This budget represents the seventeenth consecutive year with no water rate increase for its customers.

The Board of Water Commissioners signed a working agreement with AFSCME Local #1444 to cover the period of August 1, 2013 to July 31, 2016. Four of the BWW employees were trained in the removal of asbestos pipe recently. Donny Labrecque is also qualified to teach the proper way to remove asbestos pipe.

IMPROVEMENT PROJECTS:

The BWW installed 6,519 feet of water main with 353 feet of Godfrey Transmission Line during the calendar year of 2013. At years end there was approximately 250 feet of Galvanized line, approximately 6.0 miles of Cast Iron Water line, as well as less than 1 mile of transmission line to be replaced. The years efforts completed the Upper Main Street and Riverside Drive long term water main improvement project.

BWW 12-1 NHSRL #10 –In FY 2014 the water main line work was completed on Riverside Drive from Twelfth Street to Noury Street, the River crossing was tied into Riverside Drive and Hutchins Street in September of 2013.

BWW 11-3 NHSRL #9 –Work is ongoing for a solar system at Godfrey Dam and a Hydro project at the Ammonoosuc Treatment Plant facility. The Hydro Bid has been awarded to Soar Technologies.

BWW 11-2 NHSRL #8 The total project includes the carryover streets from BWW 09-2 NHSRL #7 as well as Summer Street from Elm Street to Spruce Street, and NHDOT project on Route 110. – In FY 2014 BWW connected the new high pressure line to Jericho Road and installed a new hydrant across from the Railroad Tracks on Lessard Farm Road. Also the Hillside Avenue and railroad crossing water main to Hinchey Street was slip-lined with a new 12-inch HDPE water main.

BWW 11-1 EPA #10 –The grant scope of projects includes the carry over streets from BWW 10-1 as well as completion of Brown Farm Well Improvements Phase II. The Brown Farm Well project Phase II is completed and is operational at an increased capacity of 1.4 MGD. A used Hyster 30 fork truck was purchased to facilitate material handling at the Brown Farm Well Facility. The final Pay Request was submitted in April 2014 and the grant has been closed.

BWW 09-1 Rural Development #3 –The majority of work addressed with this Loan & Grant during FY2014 was the completion of work on East Mason Street, Sunset Street and Sullivan Street. Also Hinchey Street and Third Avenue between Hinchey Street and Madigan Street were completed by July 2014.

BWW 12-2 Rural Development Loan #5 – Godfrey Transmission Line Project- BWW completed work in the amount of \$450,000 on the Godfrey Transmission Line Project. An extensive effort was made by engineering consultants, the US Forest Service, NHDES, special consultant George Pozzuto, and BWW staffs to acquire consensus and permitting on a planned path forward. Echologics was hired to non-destructively test the condition of a 10,500 lineal foot section of the 20-inch transite pipeline. Some sections of the transmission line were also videoed to check the internal condition of the pipe. BWW rebuilt the road base and ditches from the Loop Road to the State Park about 2 miles in length. The road was in disrepair and almost impassible passable. Road work remaining is to gravel the road and to slip line the pipe section below the river crossing 600 feet below the Dam. George Pozzuto was invaluable in working with the Forest Service for

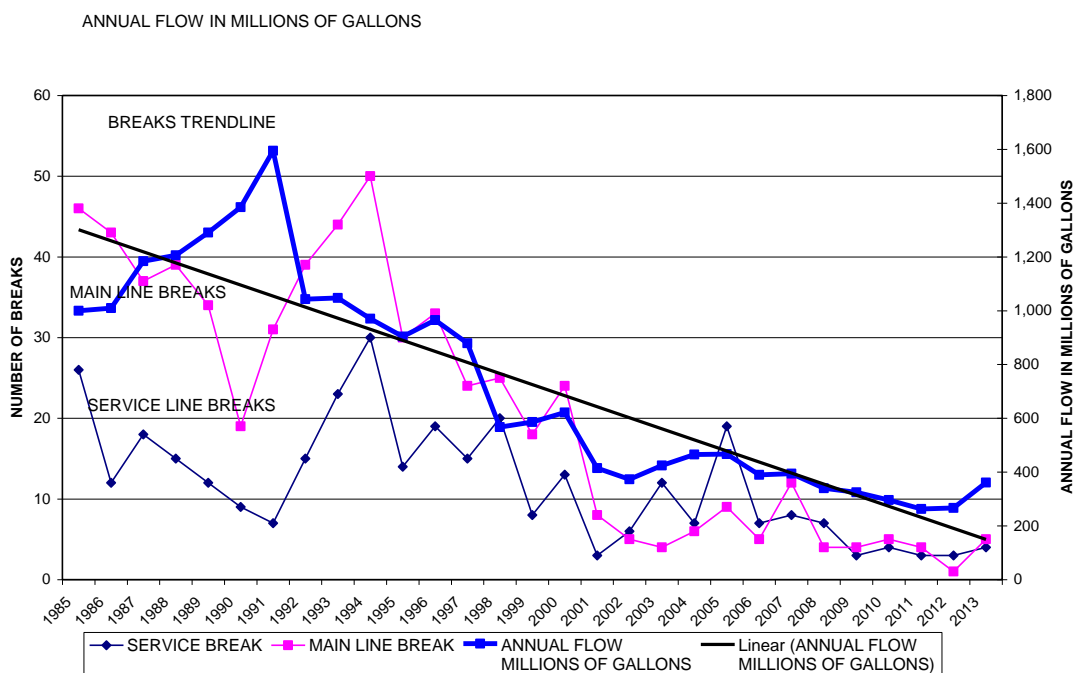
the entire transmission line project. BWW is scheduled to close the Rural Development Loan at \$450,000 in July 2014. The remaining work to be completed was also listed on the scope for a State Revolving Loan, and will be completed through a different funding source.

NHDOT Route 110 Phase II Project – BWW and NHDOT negotiated a contract to perform all water main and water service work on the Route Phase II Road Improvement Project. The contract is a time and material contract with fixed scope. A large portion of the work is due to existing water main and proposed drain system location conflicts. BWW started work in the summer of 2013 and work is on-going. At this writing water work was nearly completed from Green Street RR Bridge to 3rd Avenue. BWW work on NHDOT project should be completed in FY 2016.

	Total FY2014	FY 2013	FY 2014
Curb-to-curb street paving (includes overlay)	10.80	0	0
Number of New Meters	3584 total in system	30	92
Number of New hydrants	419 total in system	10	10
Number of Replaced services	3500 total in system	60	65
New water main installed – since 1990	27.53	2.35	1.60

Improvements to the water distribution in the City of Berlin continue with planned replacement of small diameter galvanized mains (250 feet remaining as of June 2014) and 1890 thru 1990's vintage unlined cast iron mains (31,684 feet remaining as of June 2014) 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.

WATER LINE BREAK HISTORY



Superintendent Viens is planning to retire in October of 2014 after 14 plus years with the Water Works. A transition plan was developed and Craig Carrigan will be his replacement.

Thanks to all BWW employees, Water Works Commissioners, the Honorable Mayor Paul Grenier, the City of Berlin and the NHDES Drinking Water staff for their continued support for the past year and the last 14 years. The BWW 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.

Also special thanks goes to David Bertrand for his valuable service to BWB serving on the Board of Water Commissioners for three separate terms. He served from 1992 thru 1996 (4 yrs), + 2000 thru 2003 (3 yrs), + 2012 thru 2014 (9 yrs), for a total of 10 years. His business and engineering experience was most help during the initial compliance capital improvement planning and financing in his 1st term. This same experience was very helpful during the early 2000 term to address the critical financial issues. It was at that time that BWB organizational efficiency improvements were made. Also during that time, BWB continue the established capital improvement plans and established “force account” construction work to balance the budget. Many thanks for Dave’s contributions.

Roland L. Viens
Superintendent