

BERLIN WATER WORKS

Water Commissioners for this report period were Richard P. Fournier, Paul W. Poulin, Lucien F. Langlois, Stephen J. Tardiff and Terry Block; Ex-officio member was Mayor David J. Bertrand and Mayor Paul R. Grenier. On the December 18, 2009 Commissioner Richard P. Fournier was presented a plaque by the Board for his eleven years of service to the Board; his membership on the Board was from June 2, 1998 to May 1, 2009. On December 9, 2009, Terry Block was appointed to complete the term of Ward III Commissioner, with term to expire May 1, 2010 at which time he was then reappointed to a four year term to expire May 1, 2014.

The BWW has not increased water rates in twelve years. The Board of Water Commissioners did approve a revised water rate structure as follows: the water rate will have one base step of \$30.00 for usage from 100 to 600 cubic feet, and then a rate of \$2.64 per 100 cubic feet from 700 to 1600 cubic feet was established; the remaining rates are the same as present. The new rates incorporate the present \$5.00 charge for fire protection for a single unit building and the \$2.05 customer charge. Multi-unit buildings will continue to show a fire protection charge of \$5.00 per unit above the single unit charge that is incorporated in the water rate charge.

Berlin Water Works has been able to maintain water rates because of cross-training employees and elimination of work through planned improvements and the implementation of "force account" construction project. The results of these efforts have been reduced cost through reduced staffing. There have also been continuous improvement efforts in reducing other operating cost. And finally, we have continued "Force Account" work in order to offset operating cost by performing capital

improvement projects with Berlin Water Works resources.

Berlin Water Works office hours have been changed on Friday from 8:00 am through 4:30 to 8:00 am through 4:00 pm.

Berlin Water Works completed several upgrades to the present three buildings on Willow Street and BWW logos have been placed on the three buildings. Berlin Water Works qualified for a Public Service energy savings rebate in the amount of \$1,240.⁰⁰ for the completion of lighting improvements at the Ammonoosuc Plant. The Board also authorized the staff to purchase a new phone system for the office at 55 Willow Street.

Distribution system improvements this fiscal year included a new Gould pump at the Hillsboro Pump Station. This pump upgrade is working well. It has improved reliability and reduced energy usage. The installation of the PAX mixing system in the Lancaster Tank has improved water quality by reducing variability in chlorine residual levels. Also temperature variation has been reduced resulting in no tank freeze-ups. Berlin Water Works has also continued to install backflow devices at customer's homes, and has changed to new UFR/dual check valve that will improve meter performance at very low flows.

During the winter of 2009/2010, we had 110 people running water to prevent service line freeze-up. These customers started running the water from February 4, 2010 until shut-off on March 22, 2010. The balance of the 418 running water customers did not have to run the water in winter 2009/2010. We had 5 freeze-ups that required thawing. 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 2009	FISCAL 2010
Total Flow	325,131,444	316,335,791*
Difference from previous year	11% decrease	2.7% decrease
Gallons per Day	.891 million gallons*	.867 million gallons*
Running Water Customers	141	110
Running Water Start - early	January 9, 2009	February 4, 2010
Running Water Start - regular	--	--
Running Water Finish	March 31, 2009	March 22, 2010
Frozen Water Calls - outside	55	5
Frozen Water Calls - inside	14	0
Hydrant Flushing	8/7/08 to 8/21/08	8/19/10 to 9/16/10 10/22/10 to 10/23/10
Number of main line breaks	7	3
Number of service line breaks	4	4

*** new record – low**

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 and September 2009. The testing results from September 2009 showed all passed for copper and two failed for lead the State of NH Department of Environmental Services has dropped our sample test numbers down to thirty test sites rather than the original 60 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 results are attributed to possibly old portions of the distribution system or customer pipe systems and dead end lines. Water sampling will continue to monitor lead and copper levels with the next round of testing scheduled for 2012. Water Quality Report for calendar year 2009 was distributed to all water customers as a bill stuffer in the May 2010 billing.

Melanson, Heath & Co PC was accepted by the Board to perform the Water Works financial report for period ending June 30, 2010 as well as FY 2011. Our FY 2011 budget of \$3,739,602.00 as presented at the

Commissioners May 26, 2010 budget hearing providing \$2,345,126.00 for operations and \$1,394,476.00 for water bond and loan debt, was approved June 16, 2010. The increase in the FY2011 budget is all due to increase “force account” levels of work requiring additional equipment, and “temporary staffing” in order to complete the funded work by the agreed to “completion dates”.

The City of Berlin applied and received a NH Department of Environmental Services Local Source Water Protection Grant to hire GeoInsight to perform a delineation study to better define and protect the aquifer at the Brown Farm Well Head. As of April 15, 2009 the City Manager had signed the grant and GeoInsight Inc was contracted to begin the study to protect the well head protection area. The study was completed and the final report received in June 2010.

Berlin Water Works purchased two new F150 Pick-up trucks and a new F350 5th wheeler truck with used pipe trailer to support “Force Account” Work and Routine Maintenance Work. In addition, a significant amount of equipment was purchased to

increase the “force account” efforts. Purchases included: A used Cat 322BL excavator, five used 10 wheeler dump trucks, a used 21 ton trailer, a new Komatsu front end loader, a used skid steer with a new compactor unit, a new grizzly 14’ screen, used and new trench boxes, two used compactors, additional new HDPE fusing equipment, a new asphalt cutter ,and used trench plates.

The 8000# Magnum and the 1750# Indeco hammers were completely rebuilt in anticipation of many planned streets will require ledge removal.

Another cost saving item is that two of our employees have completed a Traffic Control Instructor course. All employees have been trained in traffic Control.

IMPROVEMENT PROJECTS:

In March 2010, Rich Lougee from Senator Gregg’s office called to tell us that \$436,000 was earmarked for FY2010 EPA Grant Funds for Berlin Water Works. This will be the 10th BWW EPA “stag” Grant. This Project will be scoped and submitted in the fall of 2010.

During the winter of 2010, the BWW staff prepared and submitted the application package for the \$400,000 BWW 10-1 EPA FY 2010 Grant #9. Approval is expected during the summer of 2010. The scope of the request is for the improvement of the Brown Farm Well and for continued water main improvements.

Water Main Project BWW #02-1 funded through a Rural Development Grant was fully expended and closed in January 2010. In Fiscal 2010, work completed included three water main railroad crossings, a double Dead River crossing, a Tideflex mixing

systems in the Forbush Storage Tank, and a PAX mixing System for the Lancaster Street Storage Tank. Provan and Lorber, Inc. and Geo Insight worked with BWW to complete the design work for the Railroad Crossings and the mixing systems. DBU Construction Inc was hired to perform the horizontal borings.

Water Main Project BWW 06-1 with \$599,067 of EPA Grant #7 Funding has a balance of \$62,022 at year end June 30, 2010. The scope of Water Main Project BWW #06-1 includes the replacement of approximately 100 running water services and to replace old 2” galvanized lines. As of FY 2010, BWW has completed 65 of the running water services. Water main improvement work on Abenaki Lane, Jolbert Street, Hinchey Street, Twelfth Street, School Street, Westcott Street and Main Street was also completed with these funds.

Water Main Project BWW 07-1 with \$492,900 of EPA Grant #8 Funding has had no spending to-date. The scope of this project includes the elimination of a 6” cast iron main on Riverside Drive from Eleventh St to Morning Lane; it also includes the replacement of 6” cast iron mains with 8” mains on Hillside, Cedar, Willard, State and High Streets.

Project BWW 09-1 was prepared and submitted by BWW staff, and approved by USDA Rural Development in the amount of \$4,000,000 for water main work. The package is comprised of 26% Loan and 74% Grant. The Board signed an engineering agreement with Provan & Lorber for review, final approval of BWW design work and to provide project oversight and communication to Rural Development. The project will involve replacement of 6 inch unlined cast iron water mains throughout the

city. Design is on-going. Construction will start in FY2011.

Water Main Project BWV 09-2 was approved for a State Revolving Loan in the amount of \$3,000,000.00 with 50% forgiveness for the replacement of unlined cast iron water mains. The funds for this project are part of Federal Stimulus ARRA funds. They are subject to "Davis Bacon," "Buy American" and other additional reporting requirements. Work on Goebel Street and Burgess Street was completed this Fiscal year and work on Guilmette Street, Spring Street, Summer Street, High Street, Willard Street and Champlain Street is in progress. Berlin Water Works has, "to-date," hired 17 part time employees to supplement the BWV staff to complete the water main construction projects through "force account".

Water Main BWV 09-3 was approved for a Rural Development Grant in the amount of \$900,000 for resurfacing work at the Godfrey Dam. The package is comprised of 26% Loan and 74% Grant. The Board signed an agreement with Provan & Lorber Inc. to provide engineering design, prepare

construction bid packages, and oversee construction. All of the major equipment was bid and ordered in FY2010. Construction is scheduled to start in late August 2010 and completed by November 2010. The balance of project funding will be used for transmission line improvements.

The Board authorized the Superintendent to submit two Pre-applications to NHSRL for future proposed projects. The 1st is for hydro, wind, and /or solar power for the Ammonoosuc Facility. The 2nd is funding to continue Water Main replacement project.

The Berlin Federal Prison construction has been completed. The water service has been in operation since May 2008. The sewer construction contract started in June 2010 with completion scheduled for the spring of 2011. Berlin Water Works spoke with Joseph Bottoni at Federal Bureau of Prisons regarding the installation of SCADA communications at the FBOP pump station. An amendment to the original contract between Berlin Water Works and FBOP has been approved to cover the cost of installing SCADA communications. This project will be completed in late August 2010.

	Total to Fiscal 2010(add 2010)	FISCAL 2009	FISCAL 2010
Curb-to-curb street paving (includes overlay)	10.28	.26	.04
Number of New Meters	3584 total in system	163	37
Number of New hydrants	409 total in system	1	0
Number of Replaced services	3500 total in system	54	67
New water main installed – since 1990	21.18 miles	.56 miles	1.31

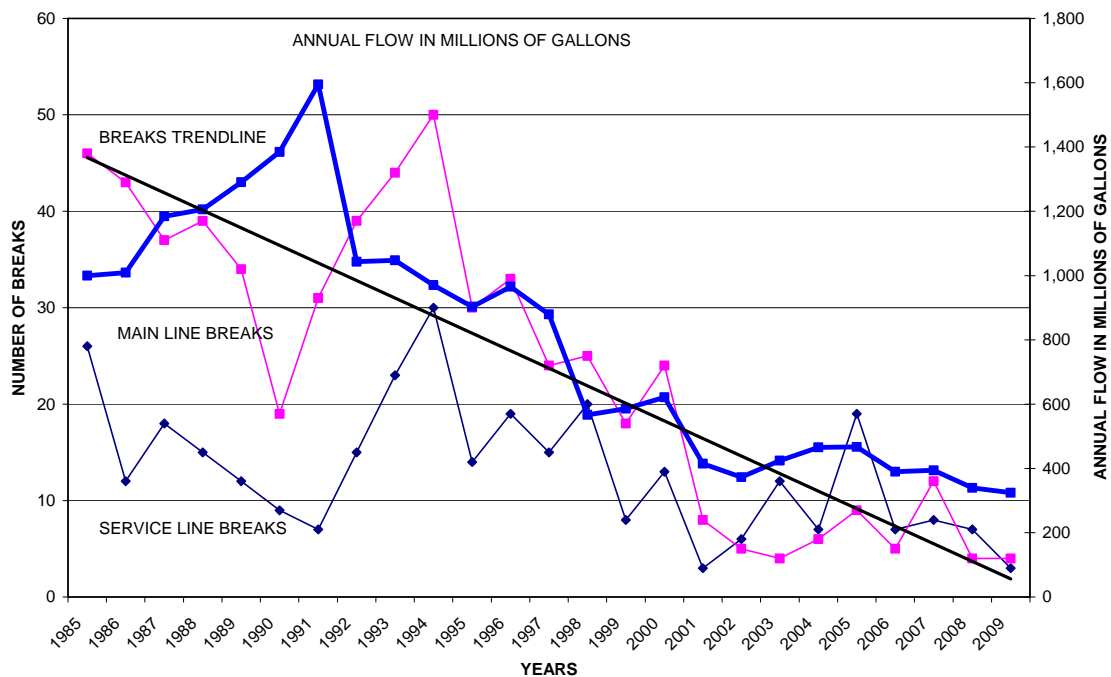
Improvements to the water distribution in the City of Berlin continue with planned

replacement of small diameter galvanized mains (1,500 feet remaining as of June

2010) and 1890 thru 1930's vintage unlined cast iron mains (43,627 feet remaining as of June 2010) with the highest frequency problems corrected first. Also the replacement of water mains are selected and then designed to improve fire protection flow capabilities. The Berlin Water Works purchased a significant number of pieces of

construction equipment in FY2010 to support Berlin Water Works increase level of "force account" construction work. The temporary staff was also increased to support increased work levels. The results of these increased efforts will be a much improved distribution system.

WATER LINE BREAK HISTORY



Thanks to all Berlin Water Works employees, Water Works Commissioners, the former Honorable Mayor David Bertrand and the newly elected Honorable Mayor Paul Grenier, and the City of Berlin for their continued

support for the past year. The Berlin Water Works 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.

Roland L. Viens, P.E.
Superintendent