

**Berlin Water Works**

Water Commissioners for this report period were Paul W. Poulin, Lucien F. Langlois, Michael Caron and Terry Block; Ex-officio member was Mayor Paul R. Grenier. As of May 18, 2012 Commissioner Terry Block resigned from the Board of Water Commissioners and was replaced by Dave J. Bertrand.

The BWW has not increased water rates in fourteen 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 “force account” construction project. The results of these efforts have been reduced cost through reduced staffing. Effective April 1, 2012 Donny Labrecque accepted the offer of a salaried position as Supervisor and Lead Operator of Treatment and Distribution. There have also been continuous improvement efforts in reducing other operating cost, most noted this fiscal year are the energy efficiency improvements at the office and garage facilities. During this fiscal year a Working Agreement between the BWW and Local Union #1444 of the American Federation of State, County and Municipal Employees AFL-CIO for the period of August 1, 2011 to July 31, 2012 was accepted by the board. And finally, we have continued “force account” work in order to offset operating cost by performing capital improvement projects with BWW resources.

The 1993, 1994, and 1995 Bonds continue to be a major financial burden on the BWW’s resources. The good news is the 20 year loan(s) term is nearing closure (FY2016). The availability of new low interest loans and grants has enabled the BWW to perform “Force account” construction work to improve our systems and balance the operation and debt budget.

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](http://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 8.7% of our customers are registered to use the online billing service.

BWW is now using “skype” for Board Meetings to allow out of town Commissioners to participate in meetings and it is also used for on going projects with Engineers, State and Federal officials.

BWW has continued to install backflow devices at customer’s homes, and have changed to new UFR/dual check valve that will improve meter performance at very low flows. The Board authorized the Superintendent to purchase an additional 200 radio read remotes and a handheld for reading the meters for the amount of \$25,000 during their January 18, 2012 meeting. BWB has installed 512 radio read units to-date.

BWW hired Provan & Lorber Engineers to update the WaterCAD water model of the BWW Distribution System to better plan future work and to help with modeling of different conditions in the Distribution System.

BWW improved the 55 Willow Street Office Building and Garage Building during this fiscal year. The Engineer for the project was H. E. Bergeron Engineers and the Contractor was Couture Construction. In July 2011 the Board awarded the contract to AR Couture Construction Corp in the amount of \$1,170,236 for both buildings. The contract with H.E. Bergeron was approved for an additional work authorization #1 on August 17, 2011 to include the services of Lee Carroll, Electrical Engineer and Dave Laurin, Architect in the amount of \$42,000. The staff was completely moved into the new offices on April 18, 2012. The BWW mechanic moved into the new Garage Facility on May 7, 2012.

During the winter of 2011/2012, we had 70 people running water to prevent service line freeze-up. These customers started running the water from January 19, 2012 until shut-off on March 21, 2012. The balance of the 257 running water customers did not have to run the water in winter 2011/2012. We had 1 freeze-up that required thawing and 14 freeze-ups inside thawed by property owner or needed water shut off outside. Efforts continue to reduce the number of running water customers, of which there were 1003 of 3500 customers in the winter of 2000-2001.

	<b>FISCAL 2011</b>	<b>FISCAL 2012</b>
Total Flow	272,796,506	249,556,005*
Difference from previous year	13.76% decrease	8.52 % decrease
Gallons per Day	.747 million gallons	.684 million gallons*
Running Water Customers	85	70
Running Water Start - early	January 25, 2011	January 19, 2012
Running Water Start - regular	--	—
Running Water Finish	April 14, 2011	March 21, 2012
Frozen Water Calls - outside	9	1
Frozen Water Calls - inside	1	14
Hydrant Flushing	8/19/10 to 9/16/10 10/22/10 to 10/23/10	9/6/11 to 9/16/11
Number of main line breaks	5	1
Number of service line breaks	4	3

\* 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. The next round of testing is scheduled for 2012. Water Quality Report for calendar year 2011 was distributed to all water customers as a bill stuffer in the May 2012 Billing.

In the month of November, 2011, we had a violation for the Total Coli form Bacteria due to two sample failures. NH Department of Environmental Service's process is that we have to notify all of our customers if we have more than one failure which the office has done thru the media and individual mailings. The tests were re-taken and re-submitted to Eastern Analytical and the samples were fine. It is more than likely it was a sampling and /or testing error and not water quality. On April 18, 2012 BWB was required to issue a "Boil Water Order" as required by NH Department of Environmental Services (NHDES) following water test sampling taken on April 16, 2012 and tested on April 17, 2012 at Eastern Analytical in Concord, NH. Following two subsequent tests at the failed site as well as two sites surrounding the failed sites, BWB was told by the NHDES that the "Boil Water Order" could be lifted. BWB believes that the problem was sampling and/or testing error and not water quality as it was resolved quickly. May 2012 BWB Compliance Testing was done by the State Lab in Concord, NH; samples were delivered by Granite State Couriers. As of June 20, the compliance testing is being completed by Gorham Water Works.

Melanson, Heath & Co PC was accepted by the Board to perform the Water Works financial report for period ending June 30, 2012 as well as FY 2013, and FY 2014. Our FY 2013 budget of \$4,177,888 as presented at the Commissioners May 23, 2012 budget hearing providing \$2,698,068 for operations and \$1,479,820 for water bond and loan debt, was approved June 13, 2012. This budget represents the fifteenth consecutive year with no water rate increase for its customers.

BWB Attorney Paul Desjardins accepted a full-time position as judge and therefore could not continue to represent BWB effective October 1, 2011; Attorney James Michalik will be representing BWB as of October 12, 2011.

BWB purchased two used trucks from the NH State Surplus Concord. The purchases were a 1996 E350 Box truck for \$4,500 which the crew will use with the fusion machine, etc. and a 2000 F450 tool box truck for \$7,500 which will be used by our mechanic. Also purchased from the State Surplus was a solar traffic arrow board. Two

other items purchased this fiscal year were a thumb for the Cat 322 excavator and a hydro-seeder. This equipment is used for “force account” water main installation.

The FCC Narrow banding mandate goes into effect January 1, 2013 requiring radio frequencies to be changed from 25 kHz to 12.5 kHz. BWW has to be in compliance with the FCC mandate by the end of 2012. At the January 18, 2012 Board meeting the Board authorized the Superintendent to purchase a new two-way radio system to be shared with the City Public Works Department. As of May 16, 2012 BWW had received one of two new radio licenses and the equipment is on hand for installation.

During the month of September, the Godfrey Dam was affected by Tropical Storm Irene and needed immediate work to repair the damage. BWW worked with FEMA to fund the needed repairs. Provan & Lorber provided a Scope of Services to perform associated work with the stabilization of the slope immediately downstream from the Godfrey Dam, replacement of rock filled timber cribbing at the stream crossing, and re-encasement of the raw water transmission main at the stream crossing. Godfrey Dam repair project is closed and \$187,000 has been received from FEMA. Included in that amount received from FEMA, \$40k was for hazardous mitigation work that BWW completed to improve the area so that if there was a similar situation again, the area would be protected.

### **IMPROVEMENT PROJECTS:**

BWW 12-1 NHSRL #10 – BWW applied for a \$2,000,000 loan for replacement of vintage unlined 6” cast iron pipe. The water mains replaced will be the highest failure rate water mains in the BWW distribution system based on our records. Streets included are Riverside Drive from Twelfth Street to Noury Street, Twitchell Lane, Alpine Street, and Eleventh Street as well as carry over streets from previous projects that have expended all funding.

BWW 11-3 NHSRL #9 –BWW applied and was approved for a “Green” Energy Grant in the amount of \$1,000,000. The project this fiscal year included the completion of the 55 Willow Street Office and Garage project, work was completed by Couture Construction and their subcontractors in June 2012. The remaining items in this project include installing wind and solar systems at several of the BWW facilities.

BWW 11-2 NHSRL #8 – Work completed this Fiscal Year includes Riverside Drive from Noury St to Cates Hill Road, High Street from Hillside Avenue to Emery Street, repair to the 16 Inch River Crossing from Community Field to Mason Street, and 4800 feet of the High pressure line off of Jericho Road. The total project includes the carryover streets from BWW 09-2 NHSRL #7 as well as Summer Street from Elm Street to Spruce Street, Norway Street from Eighth Street to 129 Norway Street, NHDOT project on Route 110 and the installation of a 16 Inch River Crossing above Bridge Street.

BWW 06-1 EPA #7 – Funds were expended in October 2011.

BWW 07-1 EPA #8 – The first pay request on this grant was submitted in January of 2012. The work completed this fiscal year included some service line work and water main replacement on Main Street from Eighth St to Twelfth Street. The 13 services on Main Street were bored under the pavement to prevent replacement of asphalt at each service line location. This project will be fully expended by December 2012.

BWW 10-1 EPA #9 – The Grant scope includes Main Street from Eighth Street to Eleventh Street, Pleasant Street sections from Mechanic Street to High Street, NH DOT Route 110 Project from First Ave to Wight Street and Phase 1 of the Brown Farm Well improvements. Provan and Lorber have been working on the Brown Farm Well improvements. The Engineering Report was completed and final design with bid documents for Phase I have been completed. The balance of this project will be spent on the Brown Farm Well Upgrade Project.

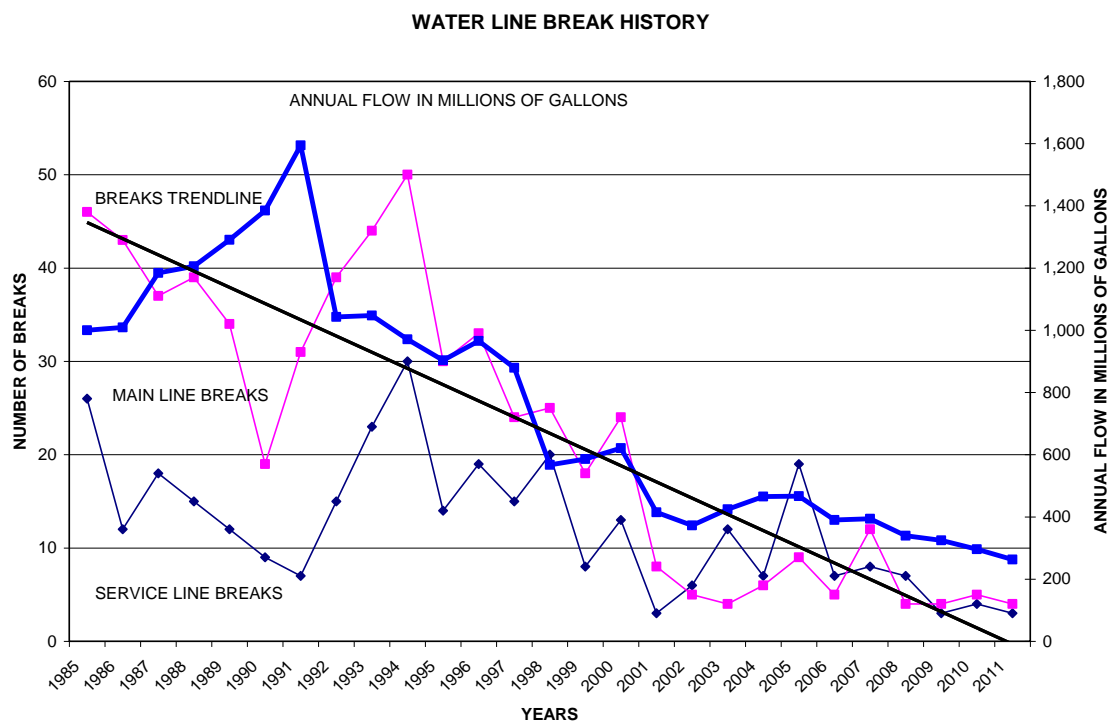
BWW 11-1 EPA #10 –The EPA grant was approved on December 2, 2011 in the amount of \$450,000. The grant scope of projects includes the carry over streets from BWW 10-1 as well as completion of Brown Farm Well Improvements Phase I.

BWW 09-1 Rural Development #3 –The majority of work completed with this Loan & Grant was on Main Street from Peavey Lane to Eighth Street and on Balsam and Sweden Streets. BWW closed on the loan for Rural Development in the amount of \$1,025,000 at a rate of 2.25% October 27, 2012.

BWW 09-3 Rural Development #4 – Work is completed on the Godfrey Dam Project. From July 26, 2011 to August 4, 2011 Godfrey Dam was shut down, and dewatered to facilitate Couture Construction's removal of the coffer and to complete some of the punch list items. The improvements include complete concrete resurfacing, two new stainless gates, new stainless steel intake screen, and a new access bridge. Bryan Defosses from NHDES Dam Safety conducted a dam inspection on August 9, 2011. Project is fully expended and closed.

	<b>Total to Fiscal 2012</b>	<b>FISCAL 2011</b>	<b>FISCAL 2012</b>
Curb-to-curb street paving (includes overlay)	10.88	.32	.70
Number of New Meters	3584 total in system	23	11
Number of New hydrants	414 total in system	1	6
Number of Replaced services	3500 total in system	91	31
New water main installed – since 1990	24.87 miles	1.52	2.22

Improvements to the water distribution in the City of Berlin continue with planned replacement of small diameter galvanized mains (830 feet remaining as of June 2012) and 1890 thru 1930's vintage unlined cast iron mains (34,731 feet remaining as of June 2012) 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 BWW purchased a number of pieces of construction equipment in FY2012 to supported BWW 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.



Thanks to all BWW employees, Water Works Commissioners, the Honorable Mayor Paul Grenier, and the City of Berlin for their continued support for the past year. 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.

Roland L. Viens, P.E.  
Superintendent