

Town of Milton

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A BETTER ACCOUNTING OF WATER USE September 10, 2012

Water Meter Upgrades

By all accounts, twenty-nine meters is all that remains on the replacement list. In the month of August the Milton Fire Department, two schools, several commercial establishments and two commercial irrigation systems received new meters. Our goal is to have all installation complete by November.

Leak Detection

At the August 6 Council Meeting, authorization to spend \$6,000 for leak testing was approved. The testing targeted the following streets:

Street	Length	Street	Length
Atlantic Ave (east of Union)	.53 mi.	Bennett St (N of Holland)	.11 mi.
Betts St (Mulbrry – Waples)	.10 mi.	Carey St. (Lake – Lavinia)	.09 mi.
Chandler (Union – end)	.18 mi.	Chestnut (New – Road St.)	.53 mi.
Collins St. (Coulter – Front)	.15 mi.	Coulter St. (Collins – Fed.)	.21 mi.
Front St. (Chestnut – Fed)	.05 mi.	Hazzard Ave. (Atlntc – Bay)	.11 mi.
Hazzard Lane (Chest – Fed)	.07 mi.	Holland (Palmer – Bennett)	.10 mi.
Lake Drive (Mulb – Carey)	.12 mi.	Lavinia St (west of Mulb)	.33 mi.
Magnolia St (Union – Mulb)	.13 mi.	Marshall (north of Federal)	.10 mi.
Mill St (Federal – Collins)	.21 mi.	Morris Ave (north of Union)	.16 mi.
New St. (Chestnut – Fed)	.10 mi.	Orchard St. (Union to .18 mi. east of Mulberry)	.33 mi.
Reed St. (Broad – Clifton)	.13 mi.	Reed St. (Clifton – Reed)	.05 mi.
Sand St. (Federal – Chest.)	.08 mi.	Tilney St. (Mulb – Union)	.12 mi.
Walnut St. (Atl. - .05 N of Front St.)	.27 mi.	Waples Place (Orchard – Orchard)	.05 mi.
Union St & Federal St.	North limit to south limit	(state-owned road)	2.43 mi.
Total (all targeted streets)	6.84 miles	@ .5 hrs per .1 miles = 34.2 hours (best estimate)	Equipment rental rate @ \$850/day x 5 days = \$4,250

In order to conduct the test, “boxes” that house isolation valves at either end of a section needed to be cleaned-out. The City of Milford provided both equipment and manpower to accomplish this task – at no cost to the Town of Milton. An alternate device from the Delaware Rural Water Association was used to detect leaks, as well. This device is quite reliable and costs nothing to use. The use of this device and the manpower provided by DRWA was provided at no charge, either.

All targeted streets and some additional places were surveyed. No leaks were found and the town was spared the estimated \$6,000 expense to find leaks. Additionally, all storm drains were checked during a dry period. No running water was found in any of them.

While leaks can occur at any time, this exercise serves to verify that the difference between water pumped and water metered *is not due to leaks in the system.*

Counting Pumped Water Twice?

As we continue to refine our effort to account for each gallon of water, every component in the system is being examined. This examination has revealed a deficiency in the way that water is metered at the wells. As a result, we are likely counting many gallons of pumped water “twice”.

When you open your faucet, water comes out because it is under pressure. The pressure comes from the above ground storage tanks – not constant pumping action. The pumps at each well will pump until the tower is nearly full. Then, the pumps will turn-off.

There is a meter at each well and there is another meter at the treatment plant where the water is sanitized. The meters count each gallon that passes from the well and into the system. But the system can push water back into the well. Water that goes back into the well is not subtracted from what was pumped. When the level of water in storage triggers the need for more pumping, some of the water that is pumped out of the wells is the same water that was already pumped once. This causes a double-counting of a portion of the water that is pumped. And, of course, we will never see that water show up in the total water meter readings from homes and businesses.

The flow meters in the well houses and treatment plant have been fine tuned so that the readings are more accurate. There are “check valves” at each pump. They are designed to prevent the backflow that causes double-counting. The performance of these valves is in question and better quality check valves are being considered as replacements. The replacement check valves and fine tuning of our flow meters should greatly increase the accuracy of our pumping records.

The pumping record of each well’s production is the basis upon which the town’s permit allocation is measured. It is also the basis upon which the “missing water” issue is considered. A more accurate record of pumping activity will help the town to stay within its permit and to meet conservation standards.

A “New” Source for Water?

As Pennoni Associates prepared their review of our existing Water Facilities Master Plan, the abandoned well within the Tidewater Environmental complex was considered. The well had been abandoned because of the odor of sulfur coming from it. In the last month, the well was examined by the firm AC Schultes. It was found to be operationally sound.

Water was pumped from the well and tested at the State of Delaware laboratory for chemicals. It was found to be safe – but the odor remains a problem.

This well (named #5) can produce nearly 300 gallons per minute and is located on the side of the river that was targeted for a new well. Re-activating the existing well could save the town money. The next step in this exploratory phase is to see if there is a system that could eliminate the sulfur odor.

An Outcome of the Planning Study

Steve McCabe of Pennoni Associates present the results of the Planning Study at the August 23rd Town Council Meeting. As a result, the Town Council voted to pre-apply for two different Drinking Water State Revolving Fund loans. One pre-application would be for a water tower. The other application would be for:

- 1) Well and pump upgrades, which could include a new well;
- 2) An inter-connection with another water utility; and
- 3) A system connector between Chestnut Street and Wagamons West Shores.

The application process may take as long as two years.