Water Works
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A Newsletter Published by
The City of Wilmington, Department of
Public Works Water Division

2012 Water Quality Report

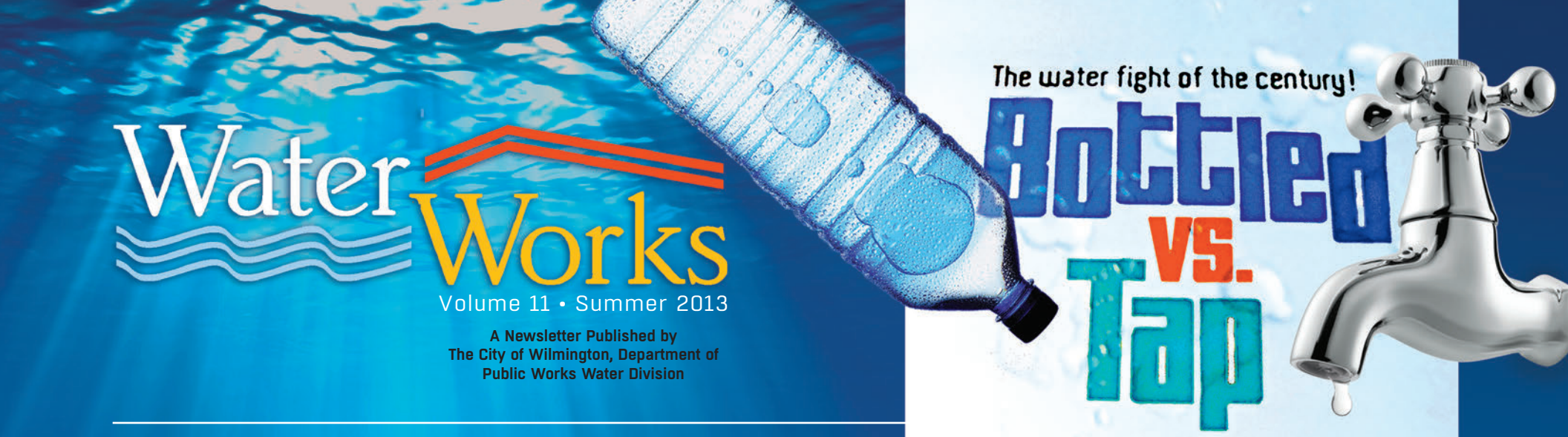
To ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in public water systems.

The Environmental Protection Agency (EPA) requires the City of Wilmington, and all other water suppliers in the US, to report yearly on specific details about testing for a number of contaminants in our water. Chemical and biological monitoring provides the data that helps suppliers, such as the City of Wilmington, make key water quality management decisions to ensure freshness and purity.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. To ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulates bottled water, which must provide the same protection to the public's health.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

(Continued on page 3)



In a three round bout, how do the opponents stack up in savings, quality and environmental impact?

SAVE MONEY!

Bottled water can cost up to 10,000 times more per gallon than tap water. The average price of drinking water in the United States is about $1.50 for 1,000 gallons. At that price, a gallon of tap water costs less than one penny. (http://www.drinktap.org/Portals/1/story_of_water/html/costs.htm 2002 AWWA)

DRINK CLEAN WATER!

Bottled water is regulated by the Food and Drug Administration (FDA), whereas tap water is regulated by the U.S. Environmental Protection Agency (EPA). The FDA regulates bottled water as a packaged food product. Some bottled water is treated more than tap water, while some is treated less or not at all. It is important when buying bottled water to read the labels to better understand what you are paying for, whether it is different tasting water, or a different method of treatment.

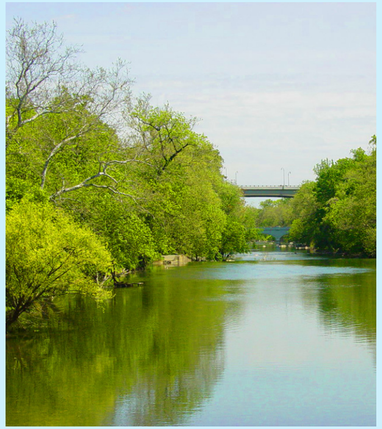
(Continued on page 9)

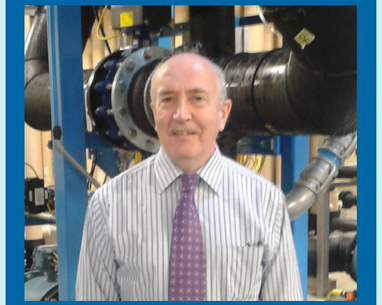
Source Water...

The City of Wilmington developed the Source Water Protection Plan (SWP Plan) in order to better protect its water supply for future generations, reduce long term operating costs and carbon footprint, avoid future treatment requirements, improve planning and response to future spills and water quality events, and leverage upstream investments to protect its water supply.

Recognizing the efforts and input of the many dedicated stakeholders in the Brandywine Creek Watershed who have been involved with this SWP Plan is very important. The SWP Plan integrates a significant amount of information from their previous studies and plans. Without the involvement of these stakeholders and the benefit of their previous efforts, this plan would not have been possible.

You can download and read the SWP Plan at **www.WilmingtonDE.gov/government/sourcewater**. If you have any questions please contact Matthew Miller, Water Quality Manager, at **302-573-5522**.





Word from the Director

The City of Wilmington continues its commitment of providing you with clean and reliable drinking water today and for future generations. Providing quality drinking water begins with ensuring that the source of your water (Brandywine Creek) is of the best quality possible. We continue to partner with other organizations in the watershed to implement our award winning source water protection program. In this report you will read about our newly upgraded treatment technology, projects in the distribution network, and things we all can do to protect and preserve water. Bringing clean water to our customers is a priority, and improvements to our treatment facilities and distribution network are a vital component to this mission. I hope you enjoy this issue of WaterWorks and our 2012 Consumer Confidence Report.

Best Wishes,

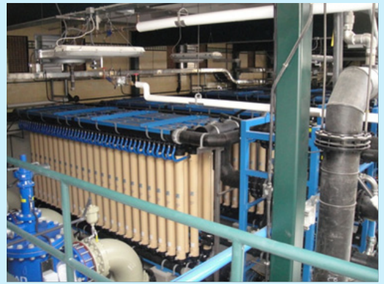
Sean Duffy, Water Division Director
Department of Public Works

100-Year Old Plant Upgraded

The City's oldest water treatment plant, the Brandywine Filter Plant (BFP), was originally built in the early 1900s at 303 East 16th Street and has undergone many upgrades over time. The majority of the primary treatment plant is well over 50 years old, and due to its age and evolving regulations, the plant is undergoing a major treatment upgrade from conventional sand filtration to membrane treatment technology. Different types of membrane systems were piloted in 2007 and construction began in November 2011. The membranes will be up, running, and producing water in 2013.

(Continued on page 5)

Filter Gallery Pre-Construction



Membrane Modules in Filter Gallery 1

Annual Water Quality Report

City of Wilmington
800 French St.
Wilmington, DE 19801

PWSID# DE0000663

June 1, 2013

Report Covers
Calendar Year 2012

Water System Contact –
Matthew Miller,
Water Quality Manager
(302) 573-5522

Water Source:
Surface Water (Brandywine Creek & Hoopes Reservoir)

How We Test Our Drinking Water

The Wilmington Water Division monitors for over 100 contaminants, including herbicides, pesticides, *Cryptosporidia, Giardia* and coliform bacteria. We collect samples from the Brandywine Creek, Hoopes Reservoir, Porter Reservoir, Cool Spring Reservoir, the filtration plants and at customers' taps in the distribution system.

Last year, over 30,000 water samples were drawn from the City's fresh water supply treatment plants and distribution system. Our laboratory performed over 70,000 water analyses on those samples. This data supports the conclusion that Wilmington's water system complies with all applicable EPA drinking water regulations.

During disinfection, certain by-products form as a result of chemical reactions between chlorine and naturally occurring organic matter in water. These are carefully controlled to keep disinfection effective and by-product levels low.

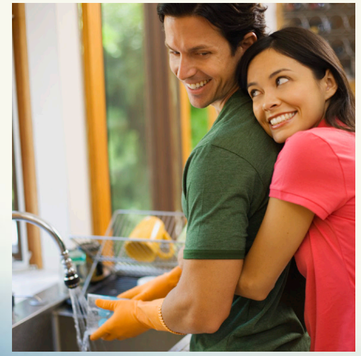
The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. If this is the case, the sample year will be noted in the report. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Wilmington is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline **(1-800-426-4791)**, or at **www.epa.gov/safewater/lead**.

The Division of Public Health, in conjunction with the Department of Natural Resources and Environmental Control (DNREC), has conducted source water assessments for nearly all community water systems in the state. Contact the City at **302-573-5522** regarding the availability of the assessment and how you may obtain a copy. The assessment may also be viewed at this website: **www.delawaresourcewater.org**.

2012 Water Quality Report

Protecting the Public from Disease

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.



Microbiological testing of water helps protect the public from waterborne diseases such as polio, diphtheria, typhoid, and cholera. Chlorine is very effective at killing or disinfecting most of these organisms in drinking water. However, *Cryptosporidium*, a microbial pathogen found in surface waters throughout the US, is resistant to chlorine. Optimized water treatment, including filtration, provides an effective barrier against passage of *Cryptosporidium* into drinking water. One commonly used measure of this treatment effectiveness is turbidity removal. Turbidity is the cloudiness of the water that is caused by particles that are generally invisible to the naked eye. As shown in **Table 1** on *page 5*, the City continues to provide water that is well within State and Federal turbidity requirements.

The most commonly-used filtration methods, such as those used by Wilmington, cannot guarantee 100% removal. The City of Wilmington began monitoring for *Cryptosporidium* in source water for its two plants beginning in November of 2005. **In 2012, the average level of *Cryptosporidium* was 0.875 ocysts per 100 L of raw water at the Porter Filter plant**. Based on research conducted on the removal of *Cryptosporidium* by common filtration methods, the level detected in the source water should have been removed by the filters at the City's treatment plant. *Cryptosporidium* has never been detected in the treated water supply.

Important Health Note for "At Risk" Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as those with cancer undergoing chemotherapy, organ transplant recipients, people with HIV/AIDS or other immune system disorders, the elderly, and infants can be particularly vulnerable to infections. These people should seek advice from their health care providers. EPA/CDC guidelines on appropriate ways to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline **(1-800-426-4791)**.

Contaminants that may be present in source water include: microbial contaminants, such as viruses and bacteria; inorganic contaminants, such as salts and metals, which can be naturally occurring; pesticides and herbicides; organic chemical contaminant; and radioactive contaminants.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in drinking water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Water Quality Statistics

Table 1: Water Quality Results–Detected Primary[1] Parameters at Entry Points to Distribution System

* For information about the Brandywine Filter Plant, please see right sidebar.

				Porter Filter Plant				
Contaminant	**Units**	**MCLG[2]**	**MCL[3] or TT[4][5]**	**Average**	**Lowest Detected Level**	**Highest Detected Level**	**Violation**	**Source**
Microbiological Indicators (2012 unless noted)								
Turbidity - Percentile	% of samples below 0.3	Not Applicable	95% of monthly samples must be less than 0.3	100	100	100	No	Soil runoff
Turbidity - Values	NTU		No sample must ever exceed 1.0	0.09	0.05	0.23	No	Soil runoff
Inorganic Chemicals (Metals and Nutrients)-(2012 unless noted)								
Barium (sampled 2010)	ppm	2	2	0.0351	0.0351	0.0351	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (sampled 2010)	ppm	0.1	0.1	0.0029	0.0029	0.0029	No	Discharge from steel and pulp mills; erosion of natural deposits
Nickel (sampled 2010)	ppb		100	2.4	2.4	2.4	No	Discharge from industrial sources; erosion of natural deposits
Fluoride	ppm	4	2/4[6]	0.82	0.57	0.99	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	ppm	10	10	1.6	0.8	2.1	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Nitrite	ppm	1	1	0.002	0.001	0.003	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Disinfectants (2012 unless noted)								
Chlorine	ppm		At least 0.3 residual entering Distribution System	1.6	1.4	1.8	No	Water additive used to control microbes
Disinfection Byproduct Precursors (2012 unless noted)								
Total Organic Carbon	ppm			1.21	0.75	1.61	n/a	Naturally present in the environment. Total organic carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection byproducts.
Total Organic Carbon	% Removal (Raw to Treated)		Must exceed 35% (25% in certain instances)	45%	34%	59%	No	
Total Organic Carbon	Compliance Ratio (rolling annual avg)		Ratio of Actual to Required Removal - must be greater than or equal to 1	1.3	1.0[7]	1.9[8]	No	

The Brandywine Filter Plant did not produce water in 2012, as it was undergoing a major treatment upgrade from conventional sand filtration to membrane treatment technology. The plant is set to produce water in 2013. For more information about the upgrading of the Brandywine Plant, please refer to the article on page 2.

100-Year Old Plant Upgraded (continued...)

The purpose of membranes is the same as that of a conventional sand filter, which is to remove particulates, including pathogens and bacteria from a water source. However, instead of using multiple beds of packed sand to filter out these contaminants, membrane systems use tiny hollow fibers to filter the water. The fiber is similar to a straw with lots of little holes along the side. These holes are 10-times smaller than the diameter of the finest human hair!

Water produced by the BFP will be available for distribution throughout the City in conjunction with the water produced at the Porter Filter Plant. Although the filtration process at each plant is different, customers will not notice a difference in water, as each plant produces high quality water that meets or exceeds all regulations. The membrane plant at the BFP is the first such facility in the State of Delaware, and is another example of how the City continues to ensure safe and reliable drinking water for our customers.

Table 2: Water Quality Results–Detected Primary[1] Parameters in Distribution System

Contaminant	Units	MCLG[2]	MCL[3] or TT[4][5]	Average	Lowest Detected Level	Highest Detected Level	Violation	Likely Source
Microbiological Indicators								
Total Coliform	% of samples positive each month	0%	5%	0.7	0	0.8	No	Bacteria that are naturally present in the environment. Used as an indicator of the presence of other potentially harmful bacteria.
Lead and Copper (based on 2008 sampling - testing is done every 3 years)								
Lead	ppb	0	90% of tap water samples samples must be less than the Action Level of 15.	3.0[9]	<2	7	No	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems
Copper	ppm	1.3	90% of tap water samples samples must be less than the Action Level of 1.3.	0.277[9]	<0.005	0.51	No	Erosion of natural deposits; corrosion of household plumbing systems
Disinfectants								
Chlorine	ppm	MRDLG = 4.0[11]	MRDL = 4.0[10]	1.03	0.64[12]	1.38[12]	No	Water additive used to control microbes
Disinfection Byproducts								
Total Trihalomethanes	ppb	Not Applicable	80: Based on Running Annual Average of Quarterly Samples	46.1[8]	14.7	79.2 [13]	No	Byproduct of drinking water disinfection. Forms due to reaction of chlorine with total organic carbon. Health effects: Some people who drink water containing THMs in excess of the MCL over many years could experience problems with their liver, kidneys or central nervous systems, and may have an increased risk of getting cancer.
Haloacetic Acids	ppb	Not Applicable	60: Based on Running Annual Average of Quarterly Samples	27.7[8]	11.4	67.7 [13]	No	Byproduct of drinking water disinfection. Forms due to reaction of chlorine with total organic carbon.
Bromochloroacetic Acid	ppb	Not Applicable	None	3.8	1.4	6.5	No	Byproduct of drinking water disinfection. Forms due to reaction of chlorine with total organic carbon.

Table 2 (Addendum): Reported Radioactive Contaminants Data

Contaminant	Units	MCLG[2]	"MCL[3] or TT[4][5]="	Highest Detected Level	Range of Levels Detected	Violation	Source
Radioactive Contaminants - (2011 unless noted)							
Beta/photon emitters	mrem/yr	0	4	3.5	3.5 - 3.5	No	Decay of natural and man-made deposits

Potential Contaminants

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic Contaminants, such as salts and metals, which can occur naturally or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.

Radioactive Contaminants, which can occur naturally or as a result of oil and gas production and mining activities.

Contact Us

You can help us ensure the safety of our water supply by reporting any unusual or suspicious activity either on our waterways, near our reservoirs, water filtration plants, water towers or pumping stations.

To report an incident or general water quality concerns, call the City Call Center, **(302) 576-3877**. If you have questions about this report, call the Water Quality Laboratory at **(302) 573-5522** or **(302) 571-4158**. Weekends or after 5 P.M. **(302) 571-4150**.

Table 3: Secondary[14] Parameters and Other Parameters of Interest Detected in Water as it Enters Distribution System

			Porter Filter Plant			
Contaminant	Units	SMCL[15]	Average	Lowest	Highest	Source
Conventional Physical and Chemical Parameters						
pH	pH units	6.5 - 8.5	7.37	6.9	7.9	Waters with pH = 7.0 are neutral
Alkalinity	ppm as $CaCO_3$	None	52.3	35	64	Measure of buffering capacity of water or ability to neutralize an acid
Hardness	ppm as $CaCO_3$	None	115.4	98	143	Naturally occurring; measures calcium and magnesium
Conductivity	mmhos/cm	None	369.7	295	449	General measure of mineral content
Total Dissolved Solids (TDS)	ppm	500	186	186	186	Metals and salts naturally occurring in the soil; organic matter
Sodium	ppm	None	22.2	22	22.2	Naturally occurring; chemical additive to treat the water; road salt application and run-off
Sulfate	ppm	250	21	21	21	Naturally occurring; can cause objectionable taste and odor in water
Chloride	ppm	250	64	50	88	Naturally occurring; chemical additive to treat the water; road salt application and run-off
Metals						
Iron	ppm	0.3	0.016	ND	0.04	Naturally occurring; chemical additive to treat the water; corrosion of pipes; can cause disoloration in water
Manganese	ppm	0.05	0.008	ND	0.017	Naturally occurring; can cause discoloration and objectionable taste in water
Zinc	ppm	5	0.09	0.03	0.176	Naturally occurring; chemical additive to treat the water

Corrections to 2011 Water Quality Report

1. Lead and Copper results reported in the 2011 CCR were listed as 2008 data, but were actually from 2011.
2. The MCL for Fluoride was reported incorrectly in the 2011 CCR. The correct MCL for Fluoride in Delaware is 2.0 ppm.
3. Nickel, sodium, and sulfate were not reported in the 2011 CCR. The following table lists the 2011 or most recent data for these contaminants. Nickel has not been analyzed since 2010.

	Year Sampled	MCL	Result
Nickel	2010	Delaware MCL=100 ppb	2.4 ppb
Sodium	2011	N/A	15.7 ppm
Sulfate	2011	250 ppm	17.2 ppm

Key to Tables

[1] Primary parameters are contaminants that are regulated by a maximum contaminant level (MCL), anything above this level of consumption may adversely affect the health of a consumer.

[2] MCLG-Maximum Contaminant Level Goal is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow no margin of safety.

[3] MCL-Maximum Contaminant Level is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

[4] TT-Treatment Technique refers to the required process intended to reduce the level of a contaminant in drinking water. EPA's surface water treatment rules require systems to (1) disinfect their water and (2) filter their water so the specific contaminant levels cited are met. Lead and copper are regulated by a treatment technique that requires systems to control the corrosiveness of their water. Total organic carbon is regulated by a treatment technique that requires systems operate with enhanced coagulation or enhanced softening to meet specified percent removals.

[5] Unless otherwise indicated, value given is a MCL.

[6] State limit is to not exceed 2.0 mg/L. Federal MCL is 4.0 mg/L.

[7] Cited average is the lowest running annual average calculated from monthly samples in 2012.

[8] Cited average is highest running annual average calculated from quarterly samples in 2012.

[9] Value given is not an average, but the 90th percentile action level.

[10] MRDL-Maximum Residual Disinfectant Level is the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

[11] MRDLG-Maximum Residual Disinfectant Level Goal is the level of drinking water disinfectant below which there is no known or expected health risk. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

[12] Cited value is the lowest and/or highest average of a minimum of 120 routine samples per month.

[13] Cited value is the highest individual level detected at a single location. MCL is based on Running annual average of quarterly samples, therefore there were no violations.

[14] Secondary parameters are contaminants that are regulated by non-enforceable guidelines because the contaminants may cause non-health related cosmetic effects, such as taste, odor, or color.

[15] SMCL: Secondary Maximum Contaminant Level is the level of a physical, chemical or biological contaminant in drinking water above which the taste, odor, color or appearance (aesthetics) of the water may be adversely affected. This is a non-enforceable guideline which is not directly related to public health.

ppm: milligrams per liter or parts per million – or one ounce in 7,350 gallons of water

ppb: micrograms per liter or parts per billion – or one ounce in 7,350,000 gallons of water

nd: not detected

How to Dispose of Medicines Properly

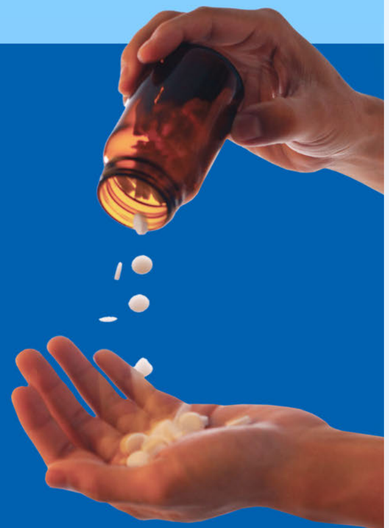
It is important to properly dispose of unwanted or expired prescription drugs in order to protect public health. Proper disposal of medications can avoid health problems from accidentally taking the wrong medicine, too much of the same medicine, or a medicine that is too old to work well. Finally, proper disposal keeps medicines from entering streams and rivers when poured down the drain or flushed down the toilet. Prescription and over the counter drugs that are flushed down the toilet or poured down the drain pass through the waste water treatment system and enter rivers. Modern waste water treatment facilities are generally not equipped to routinely remove dissolved medications. They may flow downstream and enter the sources for community drinking water supplies.

Follow these instructions on proper medicine disposal:

- **Don't flush medicines down the toilet or drain unless the label or accompanying patient information specifically instructs you to do so.**
- **Do return unwanted or expired prescription drugs to a drug take-back program or follow the steps for household disposal below:**

1. Take prescription drugs out of the original containers.
2. Mix drugs with an undesirable substance, such as cat litter or used coffee grounds.
3. Put the mixture into a disposable container with a lid, such as an empty margarine tub or into a sealable bag.
4. Conceal or remove any personal information, including Rx number, on the empty containers by covering it with permanent marker or duct tape or by scratching it off.
5. The sealed container with the drug mixture, and the empty containers, can now be placed in the trash.

For more information, visit **www.epa.gov/ppcp/** or call the Safe Drinking Water Hotline at **800-426-4791**.



Street Trees

Trees provide many water quality benefits to the City of Wilmington. For these reasons and many more, Wilmington carefully maintains its urban forest with the help of citizens.

Trees work hard every day to improve our quality of life by:

- Soaking up 50–100 gallons of water during rain events;
- Pulling carbon dioxide and other pollutants out of the air;
- Providing cool shade for buildings and reducing air conditioning energy costs; and
- Absorbing humidity and helping reduce the air temperature.

Street tree permits are required to ensure that proper care is given to trees planted or growing in public right-of-ways. A permit is required for street tree planting, street tree removal, pruning of tree branches, and disturbance of street tree roots. The permit is free and takes approximately two weeks to process. Street tree work completed without a permit is subject to fines and replanting requirements. A permit is not required for private property trees. Visit **www.WilmingtonDE.gov/residents/treepermit** for more information or contact the Urban Forest Administrator at **302-576-2582**. Look here to see how city trees help improve Wilmington's water quality:
www.WilmingtonDE.gov/residents/citytrees
www.WilmingtonDE.gov/docs/1632/CityTreesWorkForWilmington_brochure.pdf

Become a Tree Steward!

You can be a neighborhood tree ambassador and support Wilmington's urban forestry goals. As a Tree Steward, you will learn tree identification, tree care, and how to find help for the trees in your neighborhood. Contact the Delaware Center for Horticulture Community Tree Program at **302-658-6262 x106** or visit **www.theDCH.org** to find out about training workshops.

Water System Maintenance Responsibilities

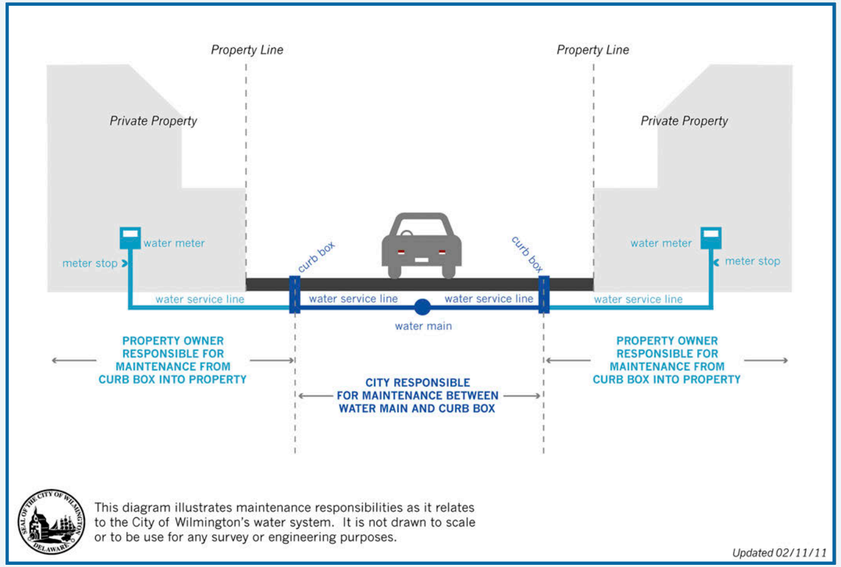
Because the City and property owners are responsible for the maintenance of different components of the water system, repairs at the curb box to a building are the responsibility of the property owner. The City of Wilmington describes the division between maintenance responsibilities as follows:

CITY RESPONSIBILITY

The City "shall make all connections to its mains, furnish, install, and maintain all service lines from the main to and including the curb cock and box, which shall be placed inside the curb line, all of which service line shall be the property of the department and under its control." [City Code Sec. 45.117]

PROPERTY OWNER RESPONSIBILITY

"All service lines from the curb cock or right-of-way line to the customer's building or place of consumption shall be installed and maintained in good condition by and at the expense of the customer, shall be of materials approved by the department, shall be placed at least four feet below the surface of the ground, and shall be subject to approval of the department." [City Code Sec. 45.120]



This diagram illustrates maintenance responsibilities as it relates to the City of Wilmington's water system. It is not drawn to scale or to be use for any survey or engineering purposes.

Updated 02/11/11

Bottled vs. Tap *(continued...)*

SAVE THE ENVIRONMENT!

Bottled water creates much more environmental damage than tap water. The bottles themselves are made of plastics created from petroleum products. The bottled water is transported on ships, trucks, and trains which all use fossil fuels to bring the water bottles to the customer. After the water is consumed, the bottles are left to be recycled, land filled, or incinerated. This requires more fossil fuels to transport the bottles to the disposal facility. Compared to tap water, which requires no plastic or transportation, bottled water has a large environmental impact.

Cleaning and Lining of City Pipes

Over time, older unlined cast iron water mains can develop rust deposits along the interior of the pipe walls. Last year, as part of our effort to increase and maintain water quality, we worked on cleaning and lining some of these water mains. This process involves cleaning out any rust deposits and lining the walls of the pipe so rust will not be able to form again. In 2012, a total of about 18,000 linear feet of 8" and 6" mains were cleaned and lined. All line valves along the project were replaced, and 10 new hydrants installed. This work was done in the following areas:

- Union Park Gardens: portions of Sycamore Street and McLane Street
- Browntown: portions of Coleman Street
- Fairfax: Brookline Road, Hearn Road, Robin Road, Foote Road, Bradmoor Road, Beaumont Road, Thomas Road, and Amhurst Road
- Delwood Road and Grayrock Drive
- Galewood Road
- Brookvalley Road
- Windsor Hills: Warwick Drive and Cambridge Drive
- Delwynn: Kammerer Drive, Ruthwynn Drive, Tanya Drive, and Delwynn Drive

This year we also cleaned and lined an additional 2,000 linear feet of mains along Claymont Road. using a new lining product from 3M that is design to restore the structural integrity of the lined mains. This project was quite successful and looks promising for future work.

Along with cleaning and lining, there may be other factors that would result in total

(continued on back)

Hey Kids, Can you match each activity to the amount of water it uses?

A. 30 gallons

B. 180 gallons

C. 4-7 gallons

D. 1/2 gallon

E. 39,090 gallons

F. 62,600 gallons

G. 15-30 gallons

H. 9.3 gallons

I. 1 gallon

J. 9-20 gallons

1. Taking a shower

2. Watering the lawn

3. Washing the dishes

4. Washing clothes

5. Flushing the toilet

6. Brushing teeth

7. Drinking

8. Needed to produce one ton of steel

9. Needed to process one can of Fruits or vegetables

10. Needed to manufacture a car and its Four tires

Answers: 1-G, 2-B, 3-J, 4-A, 5-C, 6-I, 7-D, 8-F, 9-H, 10-E

Launch of "Report It/ Resolve It" Program

The City of Wilmington has launched the online "Report It/Resolve It" Program, which allows residents to submit a non-emergency request for service (i.e., special pickups, water quality tests, or log a complaint to the Department of Public Works).

"Report It/Resolve It" allows residents to submit a request or complaint online that will be routed to the responsible division within the Department of Public Works, which will then investigate the problem and take the necessary steps to resolve it.

Following the submission to "Report It/Resolve It," users will be notified electronically regarding the progress of the request or complaint as the status changes.

The City of Wilmington's "Report It/Resolve It" Program only handles requests and complaints to the Department of Public Works. If you do not see your desired request category, please contact the Public Works Call Center at **302-576-3878**. If your request has not been resolved or acknowledged within two business days, please contact the Public Works Customer Service Call Center at **302-576-3878** or the Office of Constituent Services Office at **302-576-2489.**

To make a request or log a complaint, please visit this link: **www.reportitresolveit.WilmingtonDE.gov/** and click the "Start a New Request" button and follow the steps to submit your request. To check the status of a submitted request, please click "Find Existing Request(s)" and provide the necessary information.

Cleaning and Lining of City Pipes *(continued...)*

main replacement. As water mains reach (or have already well exceeded) their useful life, replacement becomes necessary. In the following areas, a total of nearly 2,000 linear feet of water mains were replaced in 2012:

- Union Park Gardens: Sycamore St.
- Edgemoor Terrace: Salisbury Dr.
- Hillcrest: Brookline Road, Hearn Road, Robin Road, Foote Road, Bradmoor Road, Beaumont Road, Thomas Road, and Amhurst Road
- Liftwood
- Fairfax
- Philadelphia Pike

Finally, in 2013 the City is planning an additional pipe replacement project of about 13,000 linear feet to include areas of south Wilmington, Pennrose Subdivision, Hillcrest, Edgemore Hills, and Academy Place. If you live or work in these areas, be on the lookout for more specific information. If you have further questions about these programs, please contact Luis Camacho, Water Distribution Engineer, at **302-576-3065** or **LCamacho@WilmingtonDE.gov.**