2013
Water Treatment Plant and Supply Reservoir Annual Report

ANNUAL REPORT FOR 2013

The annual report of operations of the Water Treatment Plant and Supply Reservoir for the year ending December 31, 2013 is respectfully submitted herewith.

The City of Findlay Water Treatment Plant is responsible to provide the citizens of Findlay and the surrounding area with an uninterruptible supply of safe, clean and pleasant tasting drinking water at a reasonable rate.

The water treatment plant is very fortunate to have an outstanding supply of raw water in both quantity and quality. We are also very blessed with a dedicated and well educated staff which helps ensure that we are delivering the highest quality of water possible.

The following is a list of the current water treatment and supply reservoir employees.

Water Treatment Plant Employees

Name	**Position**	**Year Hired**
Jeff Newcomer	Superintendent, Class IV	2012
Russ Boes	Supervisor, Class III	2012
Tim Foust	Operator, Class I	2000
Tim Couch	Operator, Class III	2003
Rob Householder	Operator, Class I	2004
Matt Karl	Operator, Class I	2012
Jeremy Carter	Operator, Class I OIT	2013
Brett Young	Lab Tech II, Class III	2000
Rick Parker	Lab Tech I, Class III	2001
Dean Hoge	Assistant Operator	1989

Brian Egts	Maintenance Mechanic II	1990
Brad Eblen	Maintenance Mechanic I	1991
Randy Zacharias Sr.	Maintenance Mechanic I	2011
Marina Vielhaber Zachea	Administrative Asst.	2003

Supply Reservoir

Rich Cap	Maintenance Mechanic I	2001

2013 has been a busy year for the water treatment plant and supply reservoir. Below is a partial list of items that were accomplished in addition to the routine maintenance and lab testing that we do on a daily basis.

Maintenance items

- Installed new flush valve and actuator
- Replaced influent actuator on filter #5
- Replaced drain actuator #12
- Replaced surge relief valve on west transmission main line
- Temporary fix to 1931 filter flume that is was leaking
- Repaired disconnect switch to HSP 4 & 6
- Hauled 1021 loads of lime sludge to drying beds or fields

Lab items

- Tested 187 bacteria samples for other Public Water Supplies
- Tested 63 bacteria samples for private individuals
- Tested 19 bacteria samples for new mains
- Tested 10 bacteria samples for new fire lines
- Collected and tested 39 special purpose bacteria samples
- Tested 13 samples for chemical analysis for other Public Water Supplies
- Answered rusty water complaints due to system flushing, and construction projects
- Collected 30 Lead and Copper samples for testing

Reservoir items

- Treated reservoir #1 in August
- Treated reservoir #2 in May, June, July, August
- Inspected and repaired transfer station
- Installed new roof on Pump Station #1
- Purchased new applicator for granular algae control
- Tried new algae control for reservoir, Pak27
- Monitored weekly for algae identification and enumeration from May 29 to October 16
- Monitored weekly for microcystins from June 12 to October 9

Other items

- Replace 24" transmission main leaving WTP
- Installed filter by-pass line for clearwell project
- Obtained recertification for bacteria and chemical analysis in lab

Goals for 2014

- Bid and fix clearwell's 1, 2 and 3
- Place rip-rap at reservoir
- Painting and repair of SCU #1
- Paint and repair South water tower (possibly North also)
- Look into lighting upgrade to all buildings
- Seal/waterproof outside of buildings

I would like to thank all of the water department employees for their dedicated service to the City of Findlay this past year. I would also like to thank City Council and the Mayor and her administration for their continued confidence and support of me and my staff throughout the year.

Sincerely,

Jeff Newcomer
Superintendent
City of Findlay
Water Treatment Plant

Staffing	2010	2011	2012	2013	2014
Reservoir	1	1	1	1	1
Treatment	16	16	14	14	14
Distribution	14	13	13	12	12
Utility Billing	10	10	10	10	10

Water Department

Superintendent: Jeff Newcomer

Divisions

Reservoir * Treatment * Distribution

Utility Billing

Original Budget	2012	2013	2014	$ change	% chg	2014 Personnel	Difference from 2013
Reservoir	$538,702	$ 598,013	$ 623,418	$ 25,405	4.25	$ 95,607	$(18,983)*
Treatment	$2,329,674	$ 2,153,128	$2,009,779	$ (143,349)	-6.66	$1,040,711	$(95,156)*
Distribution	$1,585,556	$ 1,466,007	$ 1,325,299	$ (140,708)	-9.60	$ 912,540	$(161,057)*
Utility Billing	$1,285,510	$ 1,140,211	$ 1,046,546	$ (93,665)	-8.21	$ 672,303	$ (40,222)*
Water Dept Total	$5,739,442	$ 5,357,359	$ 5,005,042	$ (352,317)	-6.58	$2,721,161	$(315,418)*

Strategic Partners:

- CMI
- Badger
- BRWP
- Oregon WTPs
- Other WTPs
- OTCO
- OEPA
- NW District OEPA
- All City Departments

Key Processes:

- Maintain an adequate supply of water
- Chemically treat and filter all water
- Produce pleasant tasting water at an affordable price
- Dispose of lime sludge through drying beds or land application
- Promote licensing of operators
- Maintain and develop distribution system
- Bill Water, sewer and storm water accounts

2013 Achievements

Reservoir	Algae identification and enumeration, used new algaecide, tear down old barn, fix gates at transfer station
Treatment	Start 24" line and bypass line, stop leak at plant, engineer clear well project, paint SCU
Distribution	Small Waterline Replacement
Billing	All meters have been changed to radio read (project closed)

2014 Objectives

Reservoir	Continue monitoring algae and treatment options
Treatment	Finish clear well project, paint SCU #1, paint S. tower (maybe north) monitor THMs in system
Distribution	Replace small mains & services when needed, maintain hydrants and continue leak survey
Billing	Billing software upgrade

City of Findlay Water Department
Drinking Water Consumer Confidence Report For 2012

Superintendent	Mayor	Safety-Service Director
Jeff Newcomer	Lydia L. Mihalik	Paul E. Schmelzer, P.E., P.S.

Introduction

The following report has been prepared to provide information to you, the consumer, on the quality of our drinking water. Included within this report is general health information, water quality test results, how to participate in decisions concerning your drinking water and water system contacts.

Source water information and assessment

Our water source is surface water pumped from the Blanchard River into the Findlay Reservoir, which is located three miles southeast of the water treatment plant. For the purpose of source water assessments, in Ohio all surface waters are considered susceptible to contamination. By their nature, surface waters are readily accessible and can be contaminated by chemicals and pathogens, which may rapidly arrive at the public drinking water intake with little warning or time to prepare. The City of Findlay's drinking water source protection area contains potential contaminant sources such as agricultural runoff, industrial storm water, gas station runoff, home construction, animal feed lot runoff, gas lines and gas and oil wells, wastewater treatment discharges, cemeteries, airports, silage, farm machinery repair, pesticide/fertilizer/petroleum storage areas, pasture, closed and inactive landfills, roadways and railways, and one site being investigated by Ohio EPA's Division of Emergency and Remedial Response (Hobbs Dump) just outside the protection area in Seneca County.

We treat your water using lime/soda softening, coagulation, sedimentation, stabilization, fluoridation, disinfection, and filtration to remove or reduce harmful contaminants in the source water; however, no single treatment technique can address all potential contaminants. The potential for water quality impacts can be further decreased by implementing measures to protect the Blanchard River. Information that is more detailed is in the City of Findlay's Drinking Water Source Assessment Report, which can be obtained by calling the Findlay Water Department at 419-424-7193.

Sources of contamination to drinking water

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.

Contaminants that may be present in source water include: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife; (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; (D) 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 storm water runoff, and septic systems; (E) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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

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

Who needs to take special precautions?

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

About your drinking water

The EPA requires regular sampling to ensure drinking water safety. Our water department conducted sampling for bacteria, inorganic, synthetic organic, and volatile organic contaminants during 2012. Samples were collected for 55 different contaminants, most of which were not detected in the City of Findlay water supply. The Ohio EPA requires us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. The Ohio EPA also requires us to monitor for unregulated contaminants that have no current MCLs, treatment techniques or action levels. Some of our data, though accurate, are more than one year old.

Listed below is information on those contaminants that were found in the City of Findlay drinking water.

Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Bacteriological							
Total Organic Carbon (ppm)	NA	TT	2.1	1.5 – 3.1	NO	2012	Naturally present in the environment.
The value reported under "Level Found" for Total Organic Carbon (TOC) is the lowest ratio between percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one (1) indicates that the water system is in compliance with TOC removal requirements. A value of less than one (1) indicates a violation of the TOC removal requirements.							
Turbidity (NTU)	NA	TT	0.63	0.03 – 0.63	NO	2012	Soil runoff.
Turbidity (% meeting standard)	NA	TT	99.5%	99.5% – 100%	NO	2012	
Turbidity is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. The turbidity limit set by the EPA is 0.3 NTU in 95% of the daily samples and shall not exceed 1 NTU at any time. As reported above, the Findlay Water Department's highest recorded turbidity result for 2012 was 0.63 NTU and lowest monthly percentage of samples meeting the turbidity limits was 99.5%.							
Radioactive Contaminants							
Gross Alpha (pCi/L)	0	15	<3	NA	NO	2012	Erosion of natural deposits.
Radium-228	0	5	<1	NA	NO	2012	Erosion of natural deposits
Inorganic Contaminants							
Barium (ppm)	2	2	0.011	NA	NO	2012	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Copper (ppm)	1.3	AL=1.3	0.120	NA	NO	2010	Corrosion of household plumbing systems; Erosion of natural deposits.
	Zero out of 30 samples was found to have copper levels in excess of the Action Level of 1.3 ppm.						
Fluoride (ppm)	4	4	1.01	0.74 – 1.07	NO	2012	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Lead (ppb)	0	AL=15	<2.0	NA	NO	2010	Corrosion of household plumbing systems; Erosion of natural deposits.
	One out of 30 samples was found to have lead levels in excess of the Action Level of 15 ppb.						
Nitrate (ppm)	10	10	0.19	<0.10 – 0.19	NO	2012	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Synthetic Organic Contaminants including Pesticides and Herbicides							
Atrazine (ppb)	3	3	0.14	<0.070-0.21	NO	2012	Runoff from herbicide used on row crops.
Simazine (ppb)	4	4	0.056	<0.050-0.068	NO	2012	Runoff from herbicide used on row crops.
Volatile Organic Contaminants							
Bromodichloromethane (ppb)	NA	NA	7.0	NA	NO	2012	By-product of drinking water chlorination.
Chloroform (ppb)	NA	NA	9.1	NA	NO	2012	By-product of drinking water chlorination.
Dibromochloromethane (ppb)	NA	NA	3.3	NA	NO	2012	By-product of drinking water chlorination.
Haloacetic Acids (HAA5) (ppb)	NA	60	23.9	14.6 – 33.4	NO	2012	By-product of drinking water chlorination.

Total Trihalomethane (TTHM) (ppb)	NA	80	63.7	33.6-106.0	NO	2012	By-product of drinking water chlorination.
Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems and may have an increased risk of getting cancer.							
Residual Disinfectants							
Total Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.3	1.0 – 1.5	NO	2012	Water additive used to control microbes.

Lead Educational Information

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 Findlay Water Department 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 at 800-426-4791 or at http://www.epa.gov/safewater/lead.

License to Operate (LTO) Information

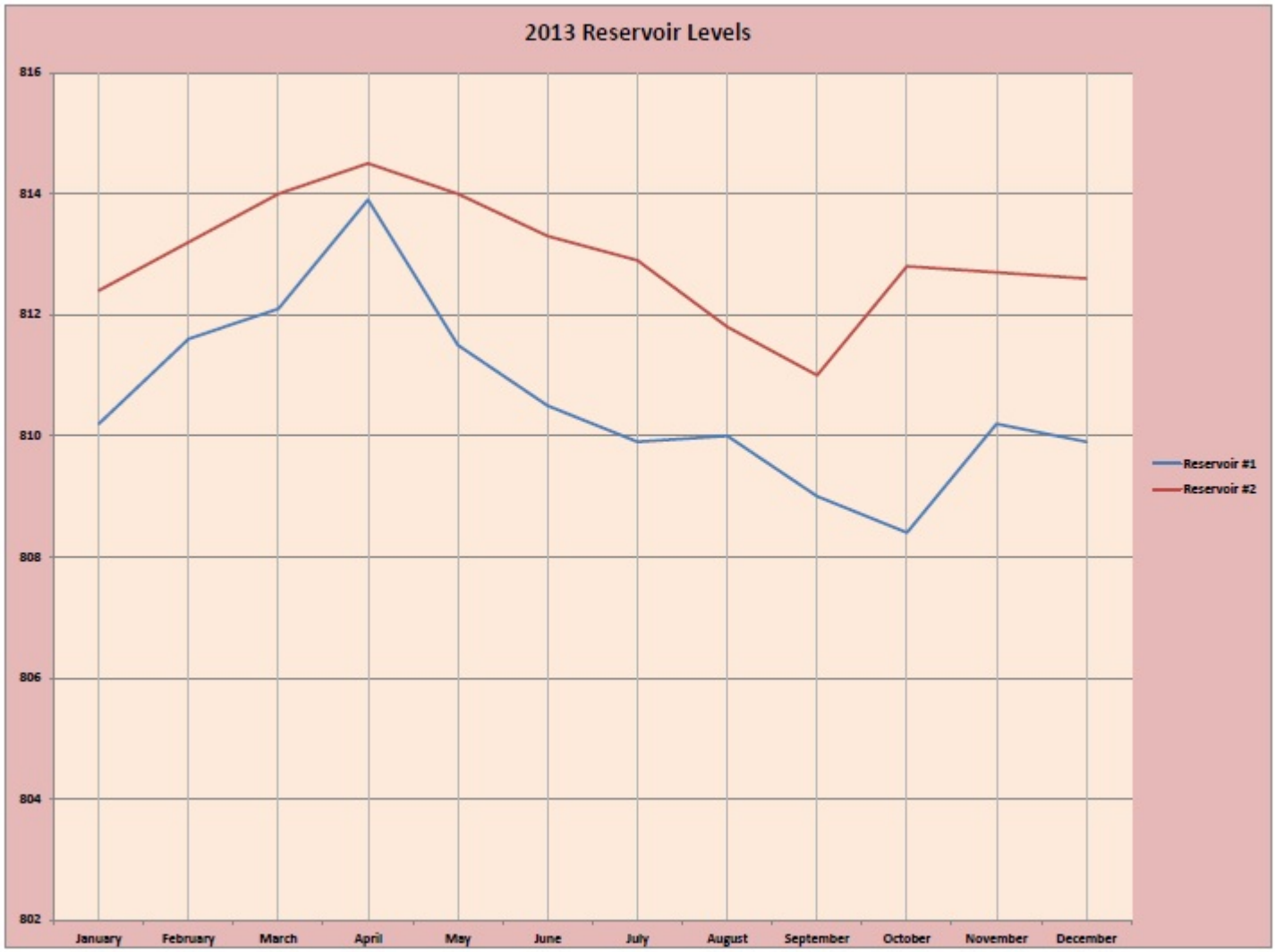
We have a current, unconditioned license to operate our water system.

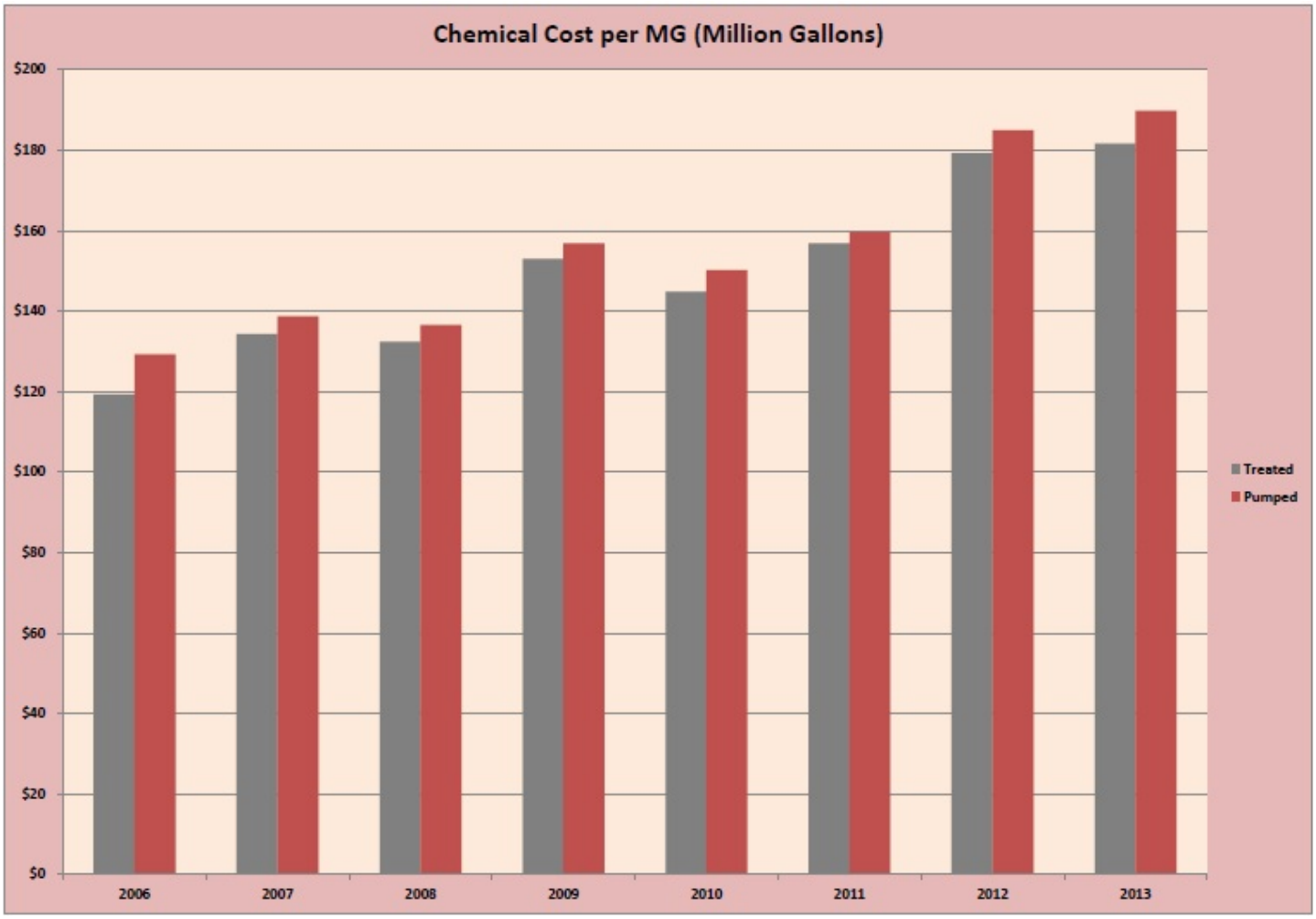
How do I participate in decisions concerning my drinking water?

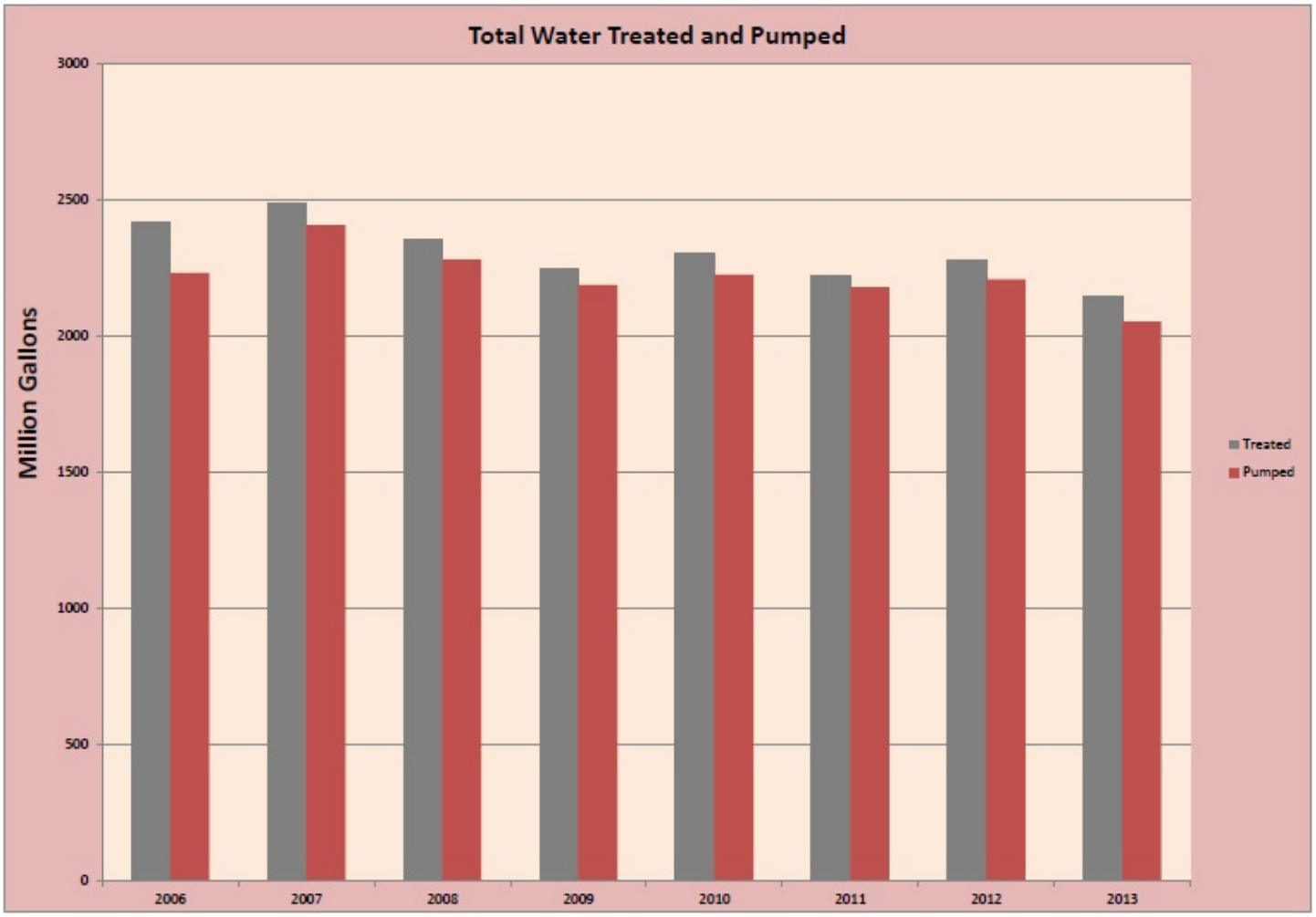
If you have any questions about this report or concerning your water utility, please contact Jeff Newcomer by calling (419) 424-7193 or by writing to 110 North Blanchard Street, Findlay, OH 45840. We want our valued customers to be informed about their water utility. You can attend regular public meetings on the first and third Tuesday of each month, at 7:30 p.m., in Council Chambers in the Municipal Building, at 318 Dorney Plaza.

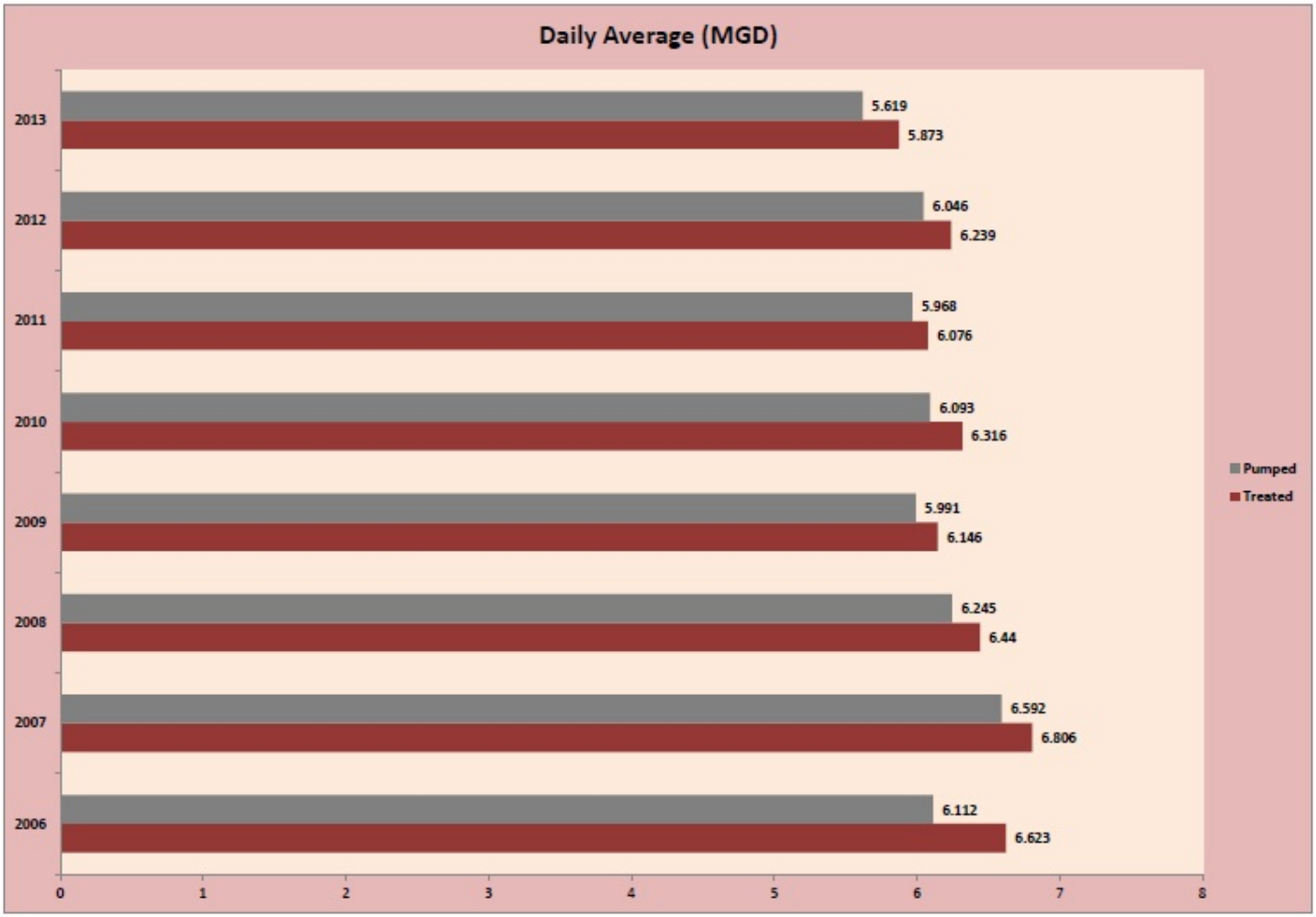
Definitions of some terms contained within this report

- Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- Maximum Contaminant level (MCL): The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- Parts per Million (ppm) or Milligrams per Liter (mg/L) are units of measure for concentration of a contaminant. A part per million corresponds to one second in a little over 11.5 days.
- Parts per Billion (ppb) or Micrograms per Liter (µg/L) are units of measure for concentration of a contaminant. A part per billion corresponds to one second in 31.7 years.
- Picocuries per Liter (pCi/L): A measure of radioactivity.
- Nephelometric Turbidity Unit (NTU): A measure of water cloudiness.
- Not Applicable (NA)
- Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
- Maximum Residual Disinfectant Level Goal (MRDLG): The level of drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- Maximum Residual Disinfectant Level (MRDL): 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.
- The "<" symbol: A symbol which means less than. A result of <5 means that the lowest level that could be detected was 5 and the contaminant in that sample was not detected.


2013 Reservoir Levels
816
814
812
810
808
806
804
802
January
February
March
April
May
June
July
August
September
October
November
December
Reservoir #1
Reservoir #2


Chemical Cost per MG (Million Gallons)
$200
$180
$160
$140
$120
$100
$80
$60
$40
$20
$0
2006
2007
2008
2009
2010
2011
2012
2013
Treated
Pumped


Total Water Treated and Pumped
Million Gallons
3000
2500
2000
1500
1000
500
0
2006
2007
2008
2009
2010
2011
2012
2013
Treated
Pumped


Daily Average (MGD)
2013
5.619
5.873
2012
6.046
6.239
2011
5.968
6.076
2010
6.093
6.316
2009
5.991
6.146
2008
6.245
6.44
2007
6.592
6.806
2006
6.112
6.623
0
1
2
3
4
5
6
7
8
Pumped
Treated

Month	Water Pumped MG	Water Treated MG	Pounds Lime	Gallons Ferric Chloride	Pounds Soda Ash	Pounds Fluoride	Pounds Carbon Dioxide	Gallons Sodium Hypochlorite	Gallons Sodium Permanganate	Pounds Carbon
January	166.82	175.42	150482	2010	24674	5778	45267	3198	679	1507
February	153.55	160.29	119378	1662	22595	5383	41247	2850	525	1377
March	162.83	174.14	152738	1646	24362	5778	47000	2913	487	1500
April	163.83	167.40	141756	2001	23199	5757	40664	3149	573	1204
May	183.28	191.67	186716	2414	27451	6579	43370	4029	697	1869
June	182.02	191.38	173148	2326	27302	6483	43913	4187	821	2039
July	183.99	191.05	188051	2276	27370	6466	43827	4703	916	2042
August	192.25	196.94	163216	2340	27849	6629	45811	5365	1001	2087
September	178.46	185.24	165046	2455	26417	5867	41328	5326	899	2880
October	168.41	176.06	158568	2777	24683	5192	40414	4616	984	4388
November	156.95	166.37	157303	2242	23157	4981	39318	3940	559	4178
December	158.55	167.77	139218	2127	23331	5394	40357	3100	0	3218
Totals	2050.94	2143.73	1895620	26276	302390	70287	512516	47376	8141	28289
Monthly Avg	170.91	178.64417	157968	2190	25199	5857	42710	3948	678	2357
Max	192.25	196.94								
Min	153.55	160.29								
cost/gallon								$ 0.70	$ 7.03	
Cost/ton			$ 148	$ 615	$ 379	$ 563	$ 63			$ 1,994
Dry Ton				60.6						
annual chemical cost			$ 140,276	$ 37,278	$ 57,276	$ 19,781	$ 16,144	$ 33,116	$ 57,252	$ 28,204
total chemical cost		$ 389,326								

WATER TREATMENT EXPENSES

	2010	2011	2012	2013
Wages	$ 805,733	$ 804,666	$ 788,696	$ 717,150
Retirement Settlements	$ 113,112		$ 160,945	
Benefits	$ 291,253	$ 347,446	$ 388,463	$ 329,426
Operating	$ 383,624	$ 377,501	$ 389,093	$ 351,698
Maintenance	$ 181,905	$ 219,071	$ 151,475	$ 95,083
Utilities	$ 211,290	$ 223,104	$ 252,719	$ 225,952
Capital	$ 91,867	$ 19,257	$ 6,437	
Other	$ 80,512	$ 35,706	$ 95,263	$ 91,654
TOTAL	$ 2,159,296	$ 2,026,751	$ 2,233,091	$ 1,810,963

SUPPLY RESERVOIR EXPENSES

	2010	2011	2012	2013
Wages	$ 43,735	$ 45,490	$ 47,580	$ 49,664
Retirement Settlements				
Benefits	$ 21,787	$ 27,016	$ 32,227	$ 33,212
Operating	$ 74,212	$ 81,406	$ 115,131	$ 130,931
Maintenance	$ 119,290	$ 55,590	$ 141,596	$ 57,816
Utilities	$ 70,436	$ 90,709	$ 94,624	$ 96,982
Capital				$ 5,812
Other	$ 8,347	$ 7,005	$ 28,539	$ 12,342
TOTAL	$ 337,807	$ 307,216	$ 459,697	$ 386,759