2012 Findlay Water Treatment Plant and Supply Reservoir Annual Report

ANNUAL REPORT FOR 2012

The annual report of operations of the Water Treatment Plant and Supply Reservoir for the year ending December 31, 2012 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.

We had three retirements during the year and they were Superintendent Jeff Newcomer, Supervisor Paul Brown and Operator Larry Snodgrass.

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
Rick Parker	Operator, Class III	2001
Rob Householder	Operator, Class I	2004
Randy Zacharias Sr.	Operator, Class I	2011
Matt Karl	Operator, Class I	2012

Brett Young	Lab Tech II, Class III	2000
Tim Couch	Lab Tech I, Class III	2003
Dean Hoge	Assistant Operator	1989
Brian Egts	Maintenance Mechanic II	1990
Chip Flanagan	Maintenance Mechanic II	2000
Brad Eblen	Maintenance Mechanic I	1991
Marina Vielhaber Zachea	Administrative Asst.	2003

Supply Reservoir

Rich Cap	Maintenance Mechanic I	2001

2012 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

- Replaced raw water actuator
- Replaced actuator on filter #2 effluent
- Upgraded carbon feed system with new plumbing and pumps
- Installed level transmitter on the soda ash storage bin
- Hauled 984 loads of lime sludge to drying beds or fields

Lab items

- Tested 259 bacteria samples for other Public Water Supplies
- Tested 56 bacteria samples for private individuals
- Tested 13 bacteria samples for new mains

- Tested 11 bacteria samples for new fire lines
- Collected and tested 31 special purpose bacteria samples
- Tested 50 samples for chemical analysis for other Public Water Supplies
- Answered rusty water complaints due to system flushing, and construction projects

Reservoir items

- Treated reservoir #1 in May, July, August and October
- Treated reservoir #2 in May, July, September
- Inspected and repaired #2 outlet structure
- Purchased and placed 4,929 tons of rip rap
- Replaced damaged floats on boat docks
- Cleaned up storm damage around reservoir

Other items

- Upgrade hardware and software for SCADA system
- Worked on clearwell project with engineering firm
- Finished concrete work around WTP
- Started operation of SCU #2
- Had generators inspected and repaired

Goals for 2013

- Start construction on clearwell fix
- Repair 24” transmission line at treatment plant
- Repair 16” line at treatment plant
- Miscellaneous concrete work at treatment plant and supply reservoir
- Place rip-rap at reservoir
- Install new roof at reservoir pump station #1
- Repair guides and gates at reservoir transfer station
- Get estimates on painting and repair of SCU #1

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

City of Findlay Water Department
Drinking Water Consumer Confidence Report For 2011

Superintendent	Mayor	Service-Safety 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 2011. Samples were collected for 51 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	1.7	1.2 – 3.3	NO	2011	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	0.22	0.04 – 0.22	NO	2011	Soil runoff.
Turbidity (% meeting standard)	NA	TT	100%	100% – 100%	NO	2011	
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 2011 was 0.22 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.							
Radioactive Contaminants							
Gross Alpha (pCi/L)	0	15	0.584	NA	NO	2006	Erosion of natural deposits.
Inorganic Contaminants							
Barium (ppm)	2	2	0.010	NA	NO	2011	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	1.03	0.85 – 1.12	NO	2011	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	0.96	<0.10 – 0.96	NO	2011	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Synthetic Organic Contaminants including Pesticides and Herbicides							
Atrazine (ppb)	3	3	0.26	0.24-0.29	NO	2011	Runoff from herbicide used on row crops.
Volatile Organic Contaminants							
Bromodichloromethane (ppb)	NA	NA	9.7	NA	NO	2011	By-product of drinking water chlorination.
Chloroform (ppb)	NA	NA	13.0	NA	NO	2011	By-product of drinking water chlorination.
Dibromochloromethane (ppb)	NA	NA	3.8	NA	NO	2011	By-product of drinking water chlorination.
Haloacetic Acids (HAA5) (ppb)	NA	60	23.4	14.6 – 33.4	NO	2011	By-product of drinking water chlorination.
Total Trihalomethane (TTHM) (ppb)	NA	80	53.3	30.7 – 83.0	NO	2011	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	1.1 – 1.4	NO	2011	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

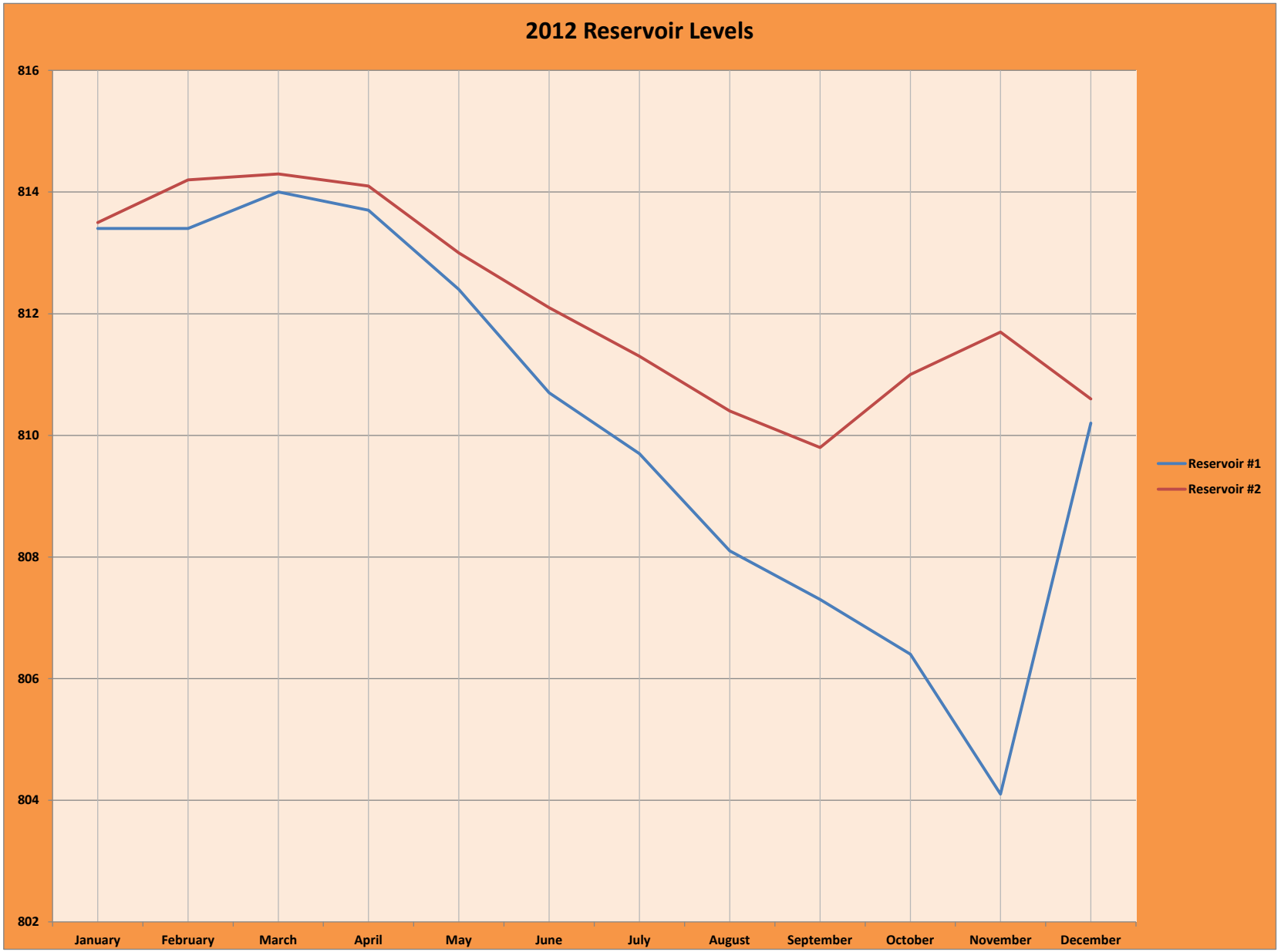
We have a current, unconditioned license to operate our water system.

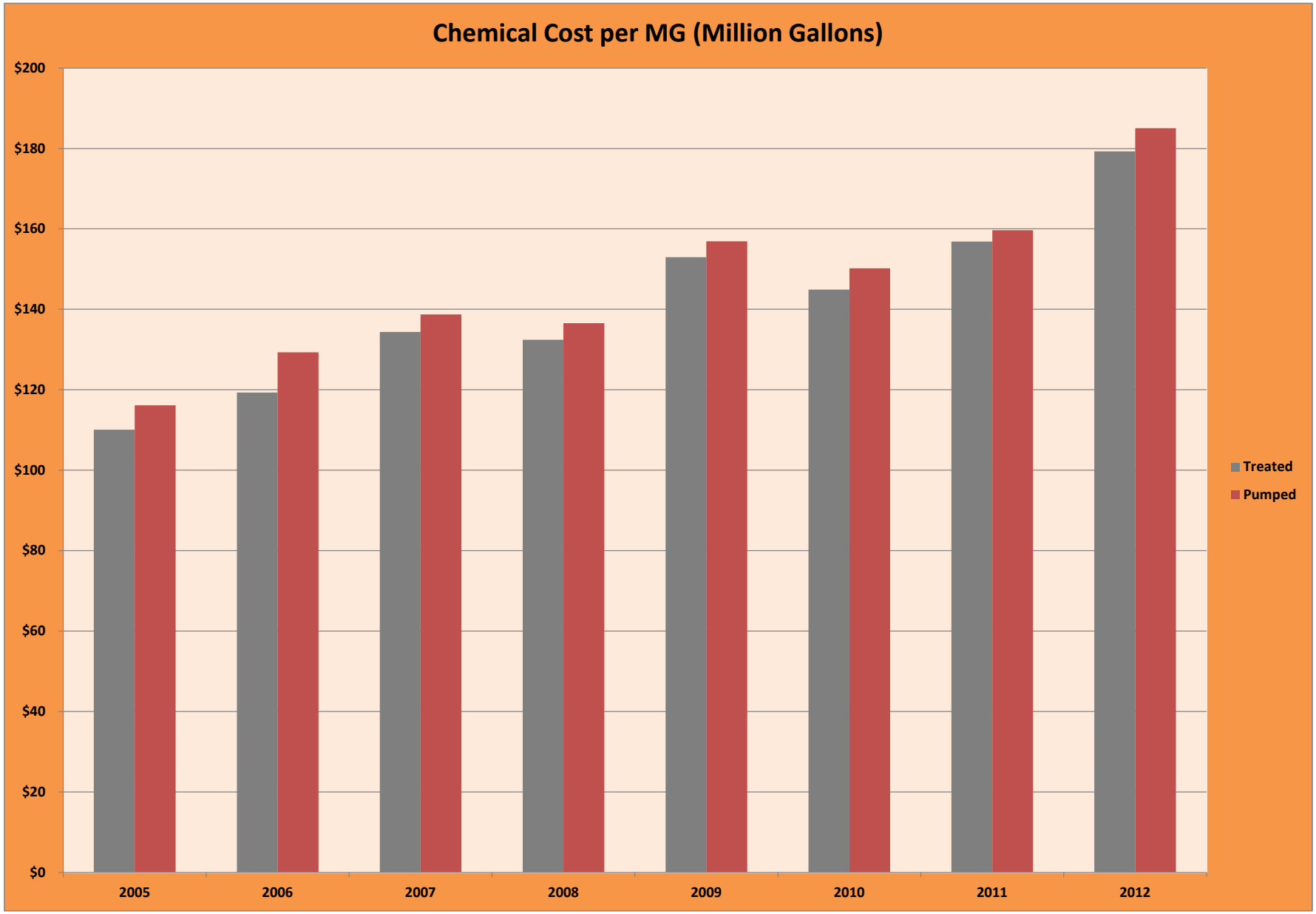
How do I participate in decisions concerning my drinking water?

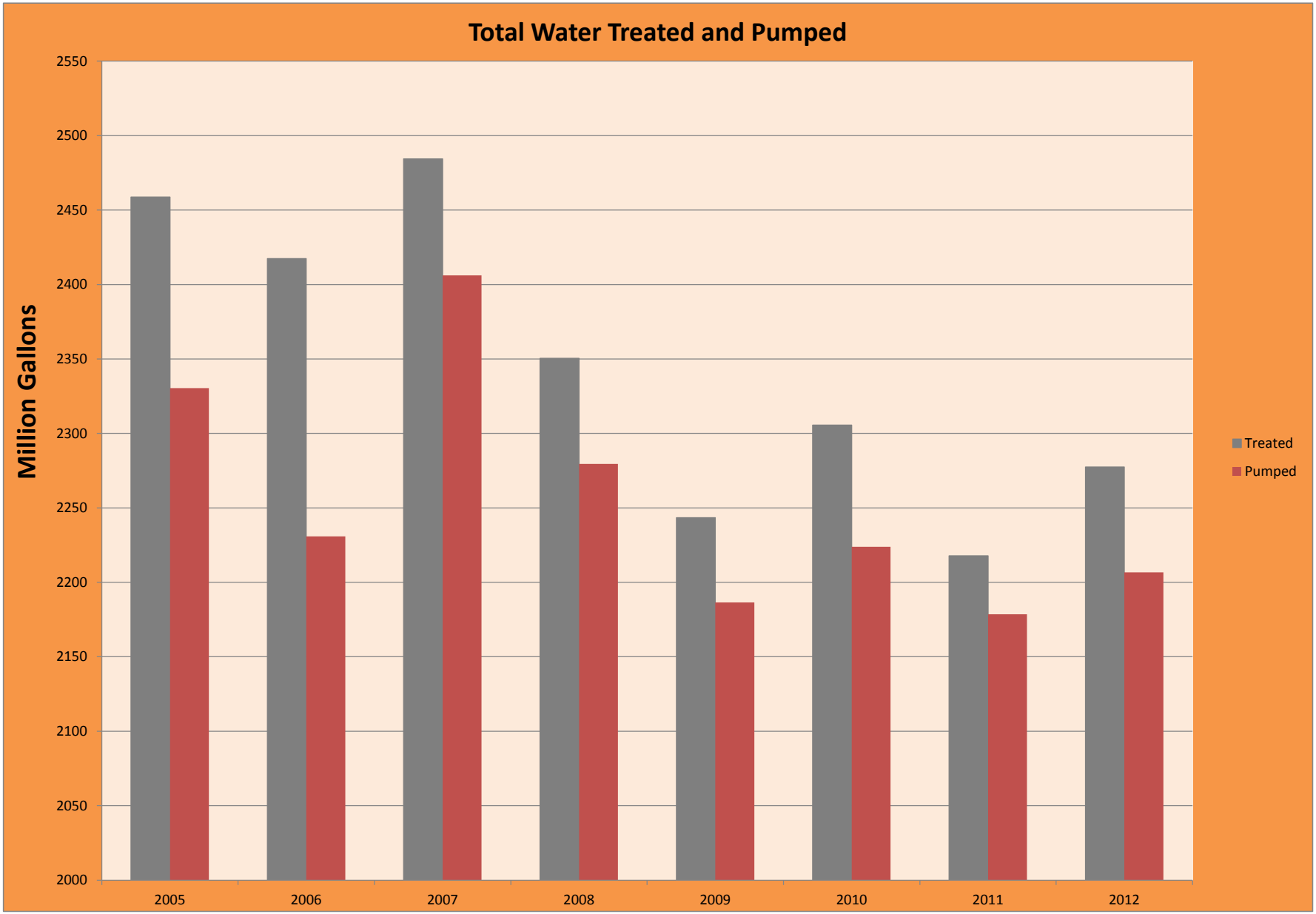
If you have any questions about this report or concerning your water utility, please contact Jeff Newcomer by calling (419) 424-7193 or by writing to 110 North Blanchard Street, Findlay, OH 45840. We want our valued customers to be informed about their water utility. You can attend regular public meetings 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.

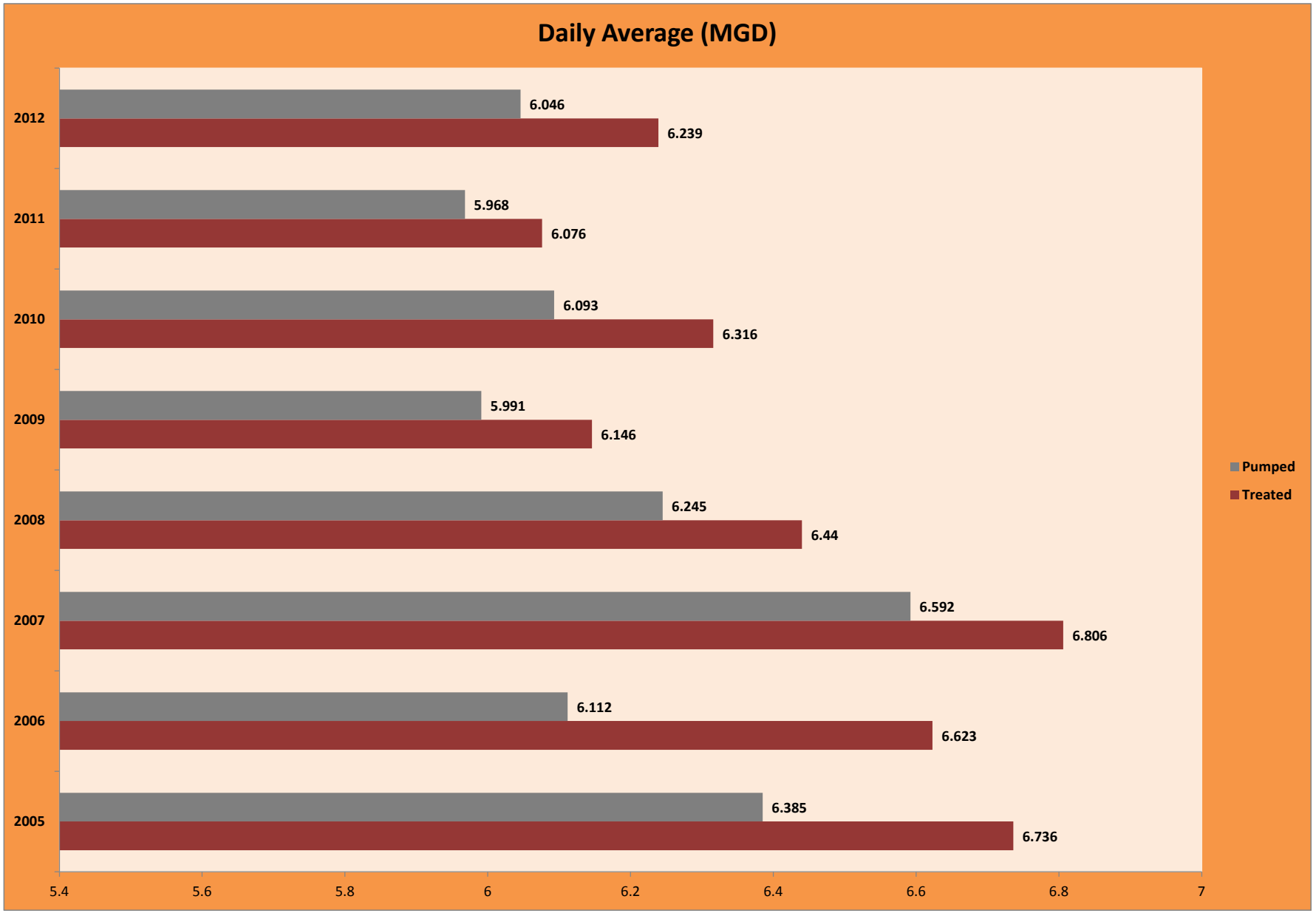
Definitions of some terms contained within this report

- 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.


2012 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
2005
2006
2007
2008
2009
2010
2011
2012
Treated
Pumped


Total Water Treated and Pumped
Million Gallons
2550
2500
2450
2400
2350
2300
2250
2200
2150
2100
2050
2000
2005
2006
2007
2008
2009
2010
2011
2012
Treated
Pumped


Daily Average (MGD)
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
2005
6.385
6.736
5.4
5.6
5.8
6
6.2
6.4
6.6
6.8
7
Pumped
Treated

WATER TREATMENT EXPENSES

	2009	2010	2011	2012
Wages	$ 816,854	$ 805,733	$ 804,666	$ 788,696
Retirement Settlements		$ 113,112		$ 160,945
Benefits	$ 338,486	$ 291,253	$ 347,446	$ 388,463
Operating	$ 384,748	$ 383,624	$ 377,501	$ 389,093
Maintenance	$ 115,276	$ 181,905	$ 219,071	$ 151,475
Utilities	$ 211,417	$ 211,290	$ 223,104	$ 252,719
Capital		$ 91,867	$ 19,257	$ 6,437
Other	$ 108,879	$ 80,512	$ 35,706	$ 95,263
TOTAL	$ 1,975,660	$ 2,159,296	$ 2,026,751	$ 2,233,091

SUPPLY RESERVOIR EXPENSES

	2009	2010	2011	2012
Wages	$ 42,907	$ 43,735	$ 45,490	$ 47,580
Retirement Settlements				
Benefits	$ 21,721	$ 21,787	$ 27,016	$ 32,227
Operating	$ 32,323	$ 74,212	$ 81,406	$ 115,131
Maintenance	$ 33,426	$ 119,290	$ 55,590	$ 141,596
Utilities	$ 70,291	$ 70,436	$ 90,709	$ 94,624
Capital	$ 9,316			
Other	$ 7,161	$ 8,347	$ 7,005	$ 28,539
TOTAL	$ 217,145	$ 337,807	$ 307,216	$ 459,697

2012Chemical Report

Month	Water Pumped MG	Water Treated MG	Pounds Lime	Gallons Ferric Chloride	Pounds Soda Ash	Pounds Fluoride	Pounds Carbon Dioxide	Gallons Chlorine	Pounds Carbon	Pounds Polymer	Gallons Sodium Permanganate	Total Monthly Chemical Cost monthly cost	Pumped Cost/MG	Treated Cost/MG
January	176.8	179.47	149171	2154	25219	5602	40643	3228	0	29	833			
cost/chemical			11038.65	3234.28	4776.73	2009.44	1392.02	2256.37	0.00	57.86	5935.13	30700.48	173.65	171.06
February	168.6	169.89	128558	2029	23937	5406	36227	2986		27	733			
cost/chemical			9513.29	3046.59	4533.91	1939.13	1240.77	2087.21	0.00	54.81	5222.63	27638.34	163.93	162.68
March	177.15	175.47	153697	2139	24690	5956	38028	2909		28	728			
cost/chemical			11373.58	3211.76	4676.53	2136.42	1302.46	2033.39	0.00	56.84	5187.00	29977.97	169.22	170.84
April	176.83	175.80	141831	2107	24862	5978	39615	3306		28	820			
cost/chemical			10495.49	3163.71	4709.11	2144.31	1356.81	2310.89	0.00	56.84	5842.50	30079.67	170.11	171.10
May	206.61	210.07	196416	2543	30568	7211	45571	4155		31.7	990			
cost/chemical			14534.78	3818.37	5789.88	2586.59	1560.81	2904.35	0.00	64.35	7053.75	38312.88	185.44	182.38
June	206.81	216.63	184517	2609	31727	7710	43890	4661		1.4	981			
cost/chemical			13654.26	3917.47	6009.41	2765.58	1503.23	3258.04	0.00	2.84	6989.63	38100.46	184.23	175.88
July	219.86	231.46	225748	2791	34110	8036	49230	6081	409	1.5	1033			
cost/chemical			16705.35	4190.75	6460.78	2882.51	1686.13	4250.62	407.77	3.05	7360.13	43947.08	199.89	189.87
August	202.48	215.2	179233	3434	31579	7653	42634	6535	2773		1177			
cost/chemical			13263.24	5156.23	5981.38	2745.13	1460.21	4567.97	2764.68	0.00	8386.13	44324.97	218.91	205.97
September	177.43	183.82	157080	2177	26206	6541	39961	5057	903	0	1046			
cost/chemical			11623.92	3268.81	4963.68	2346.26	1368.66	3534.84	900.29	0.00	7452.75	35459.22	199.85	192.90
October	176.38	189.71	147814	2218	27220	6744	44264	4028	977	0	849			
cost/chemical			10938.24	3330.38	5155.74	2419.07	1516.04	2815.57	974.07	0.00	6049.13	33198.23	188.22	174.99
November	162.06	166.71	135878	1840	23409	5698	40374	3082	1076	0	654			
cost/chemical			10054.97	2762.80	4433.90	2043.87	1382.81	2154.32	1072.77	0.00	4659.75	28565.19	176.26	171.35
December	155.76	163.17	122329	1859	22526	5788	40312	2937	1372	0	701			
cost/chemical			9052.35	2791.33	4266.65	2076.16	1380.69	2052.96	1367.88	0.00	4994.63	27982.64	179.65	171.49
Totals	2206.77	2277.4	1922272	27900	326053	78323	500749	48965	7510	146	10545			
Monthly Avg	183.90	189.7833	160189	2325	27171	6527	41729	4080	626	12.18	878.75			
Max	219.86	231.46												
Min	155.76	163.17												
cost/gallon								0.699			7.125			
Cost/ton			148.00	615.00	378.82	717.40	68.50		1994.00	4060.00				
annual chemical cost			$ 142,248	$ 41,892	$ 61,758	$ 28,094	$ 17,151	$ 34,227	$ 7,487	$ 297	$ 75,133	$ 408,287		
cost/MG													$ 185.02	$ 179.28