2014

Water Treatment Plant and Supply Reservoir

Annual Report

ANNUAL REPORT FOR 2014

The annual report of operations of the Water Treatment Plant and Supply Reservoir for the year ending December 31, 2014 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
Brett Young	Supervisor, Class III	2000
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	2013

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

2014 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

- Repaired rotating assembly on the truck loading pump
- Installed new maintenance air compressor
- Installed new controller for raw water valve
- Installed new gearbox on SCU 2
- Installed new surge relief valve on east side transmission main
- Replaced all interior lights with more efficient LED lighting
- Hauled 965 loads of lime to drying bed or fields

Lab items

- Tested 232 bacteria samples for other Public Water Systems
- Tested 42 bacteria samples for private individuals
- Tested 72 bacteria samples for new mains
- Tested 14 bacteria samples for new fire lines
- Collected and tested 43 special purpose bacteria samples
- Collected UCMR-3 samples for testing
- Answered rusty water complaints due to system flushing and construction projects, also investigated complaints regarding taste and odor

Reservoir items

- Repaired raw water pump
- Treated reservoir #1 with algaecide in July
- Treated reservoir #2 with algaecide in June and August
- Monitored weekly conducting algae identification and enumeration on reservoirs 1 and 2 from May 15th to October 27th
- Sampled weekly for microcystins on tap and raw water from July 16 to October 15th

Other items

- Started the repairs to clearwell's 1,2 and 3
- Installed new High Service Pump with VFD control
- Painted South Water Tower
- Installed new interior lights at the water department complex
- Seal/waterproofed distribution building and chemical building
- Re-lined chemical spill basin
- Purchase new gear box and motor for flash mix basin
- Repaired reservoir force main

Goals for 2015

- Tuck-point/seal administration building and generator at WTP
- Refinish floors in chemical spill areas (phase I)
- Lab upgrades to include replace/repaint cabinets
- Install new lab floor
- Look into raw water assessment
- Paint North Water Tower
- Paint/repair SCU 1
- Exterior lighting replacement at water complex

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 Level	2011	2012	2013	2014	2015
Reservoir	1	1	1	1	1
Water Treatment	16	14	14	13	13
Water Distribution	13	13	12	13	13
Utility Billing	10	10	10	10	10

Water Department

Superintendent: Jeff Newcomer

Divisions

Reservoir * Treatment * Distribution

Utility Billing

Budget		2012	2013	2014 projection	2014 budget	2015 budget	$ change	% Difference from 2014
Supply Reservoir (SR)	Personal Services	$79,807	$82,875	$78,963	$95,607	$98,134	$2,527	2.64%
	Other	$379,890	$298,072	$232,904	$507,811	$316,235	-(191,576)	-37.73%
Water Treatment (WT)	Personal Services	$1,338,104	$1,046,578	$959,848	$1,040,711	$1,003,715	$(36,996)	-3.55%
	Other	$888,550	$764,386	$1,009,427	$1,023,368	$1,076,109	$52,741	5.15%
Water Distribution (WD)	Personal Services	$1,011,295	$931,777	$907,611	$915,040	$1,009,610	$94,570	10.34%
	Other	$280,558	$321,873	$375,067	$412,759	$457,946	$45,187	10.95%
Utility Billing (UB)	Personal Services	$676,804	$671,839	$644,249	$672,303	$ 687,655	$15,352	2.28%
	Other	$189,007	$224,090	$255,756	$274,215	$209,560	$(64,655)	-23.58%

Budget Highlights

Supply Reservoir

- Increase in operational chemicals for treatment of reservoirs with algaecide
- Increase in B&G would like to inspect outlet structures for zebra mussels

Water Treatment

- Increase in fuel due to filling of generator (last filled in 2012)
- Increase in chemical for additional Carbon dosing
- Increase in small equipment need to replace radios for telemetry

Water Distribution

- Increase in Radmeter due to the possible purchase of radio read meters if needed
- Increase in R&M streets due to increase in main breaks

2014 Capital Improvement Highlights

- South Tower painting complete with new Logo
- Purchased new backhoe in WD
- New generator for WD and UB
- Chemical Spill basin re-lined
- Interior lighting upgrade at Water complex
- New flash mix gear box purchased
- Sealed exterior buildings at Water complex
- Continuing work on Clearwell

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 and distribution personnel
- Maintain and develop distribution system
- Bill water, sewer and storm water accounts

2014 Achievements

- Received incentive check from AEP for interior lighting upgrade
- Transferred new water services on Logan Ave.
- Increasing autopay and online payments for utility bills
- Expanded use of plastic water line to cut installation cost and long term maintenance

2015 Objectives

- Billing software upgrade
- Replace small mains & services when needed, maintain hydrants and continue leak survey
- Continue monitoring reservoirs
- Paint SCU 1
- Finish sealing of building exterior
- Look into lab cabinet upgrade
- Refinish floors in chemical areas
- Reservoir Force Main repair

Strategic Partners:

- CMI
- Badger meter
- BRWP
- Oregon WTP
- Other municipalities
- OTCO
- NW District OEPA
- All City Departments
- OEPA

City of Findlay Water Department
Drinking Water Consumer Confidence Report For 2013

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 2013. Samples were collected for 52 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	2.0	1.7 – 3.2	NO	2013	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	0.30	0.04 – 0.30	NO	2013	Soil runoff.
Turbidity (% meeting standard)	NA	TT	100%	100% – 100%	NO	2013	
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 2013 was 0.30 NTU and lowest monthly percentage of samples meeting the turbidity limits was 100%.							
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	<10	NA	NO	2013	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Copper (ppm)	1.3	AL=1.3	0.230	NA	NO	2013	Corrosion of household plumbing systems; Erosion of natural deposits.
	One 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	0.82 – 1.13	NO	2013	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Lead (ppb)	0	AL=15	6.1	NA	NO	2013	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	0.50	<0.10 – 0.50	NO	2013	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Synthetic Organic Contaminants including Pesticides and Herbicides							
Atrazine (ppb)	3	3	0.084	NA	NO	2013	Runoff from herbicide used on row crops.
Simazine (ppb)	4	4	<0.050	NA	NO	2013	Runoff from herbicide used on row crops.
Volatile Organic Contaminants							
Bromodichloromethane (ppb)	NA	NA	11.0	NA	NO	2013	By-product of drinking water chlorination.
Chloroform (ppb)	NA	NA	15.0	NA	NO	2013	By-product of drinking water chlorination.
Dibromochloromethane (ppb)	NA	NA	4.4	NA	NO	2013	By-product of drinking water chlorination.
Haloacetic Acids (HAA5) (ppb)	NA	60	25.0	15.1 – 29.1	NO	2013	By-product of drinking water chlorination.

Total Trihalomethane (TTHM) (ppb)	NA	80	70.8	40.2 – 87.0	NO	2013	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	1.4	1.0 – 1.5	NO	2013	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.

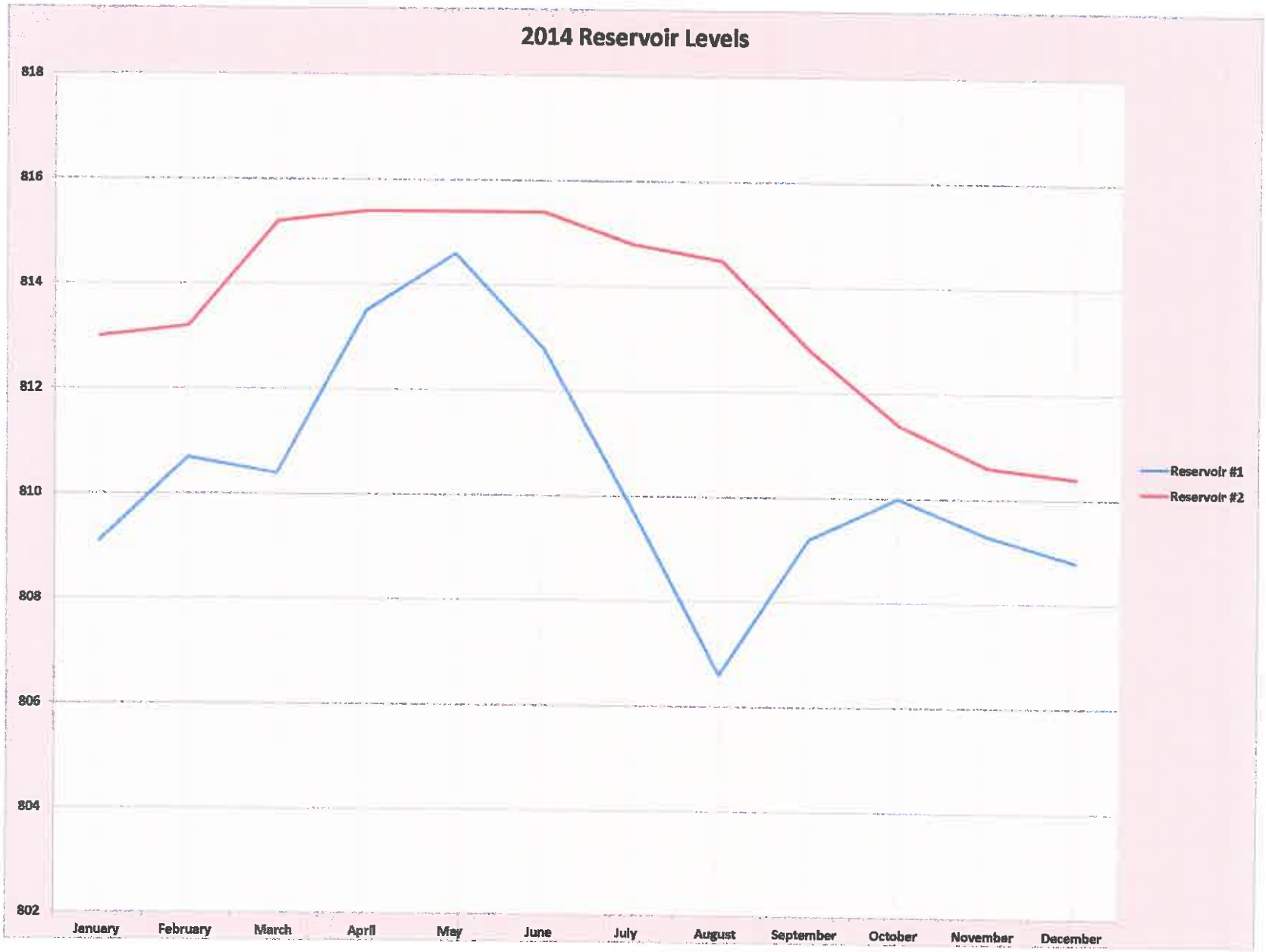
Definitions of some terms contained within this report

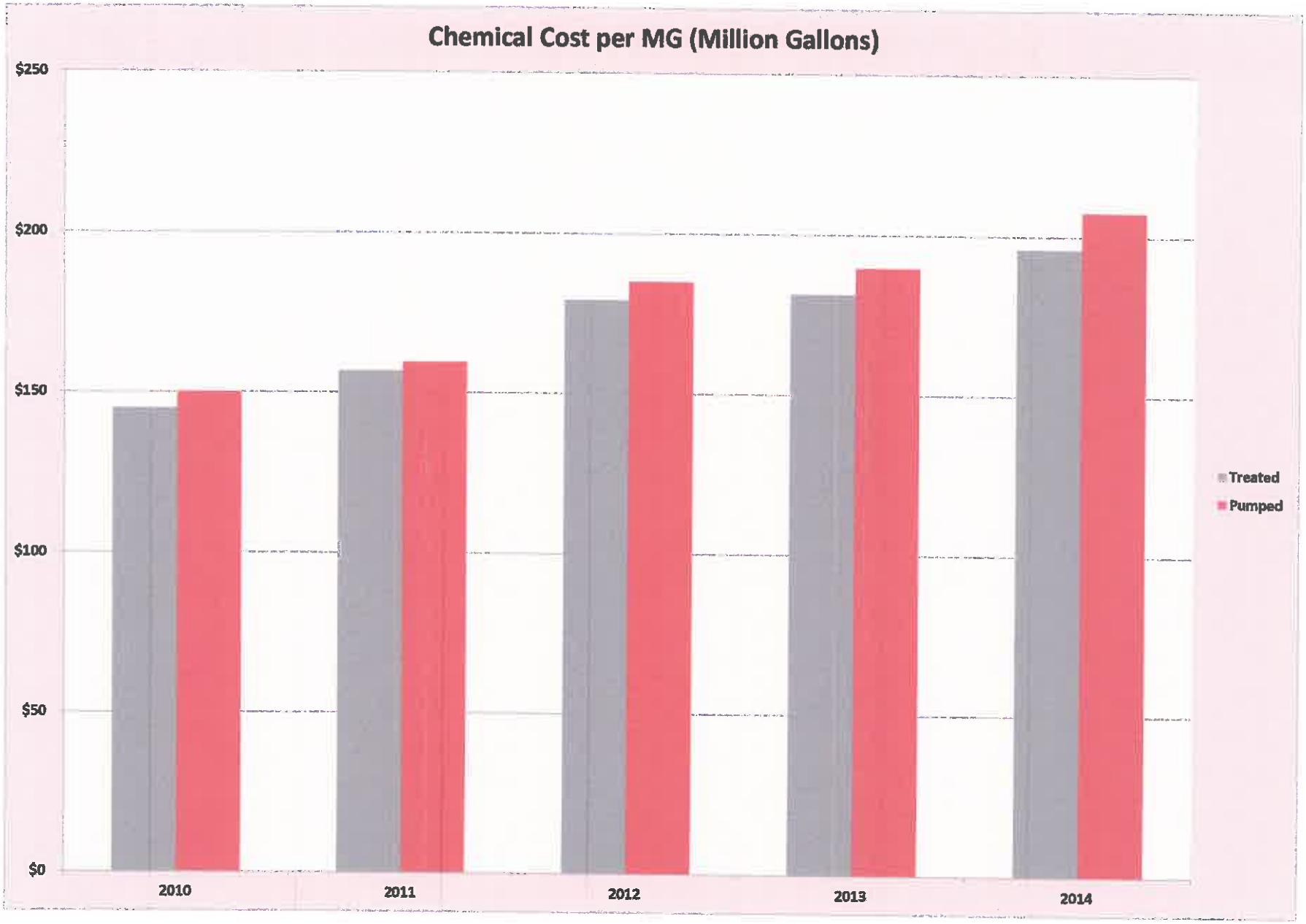
- Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- Maximum Contaminant level (MCL): The highest level of contaminant that is allowed in drinking water. MCLs are set as close 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.

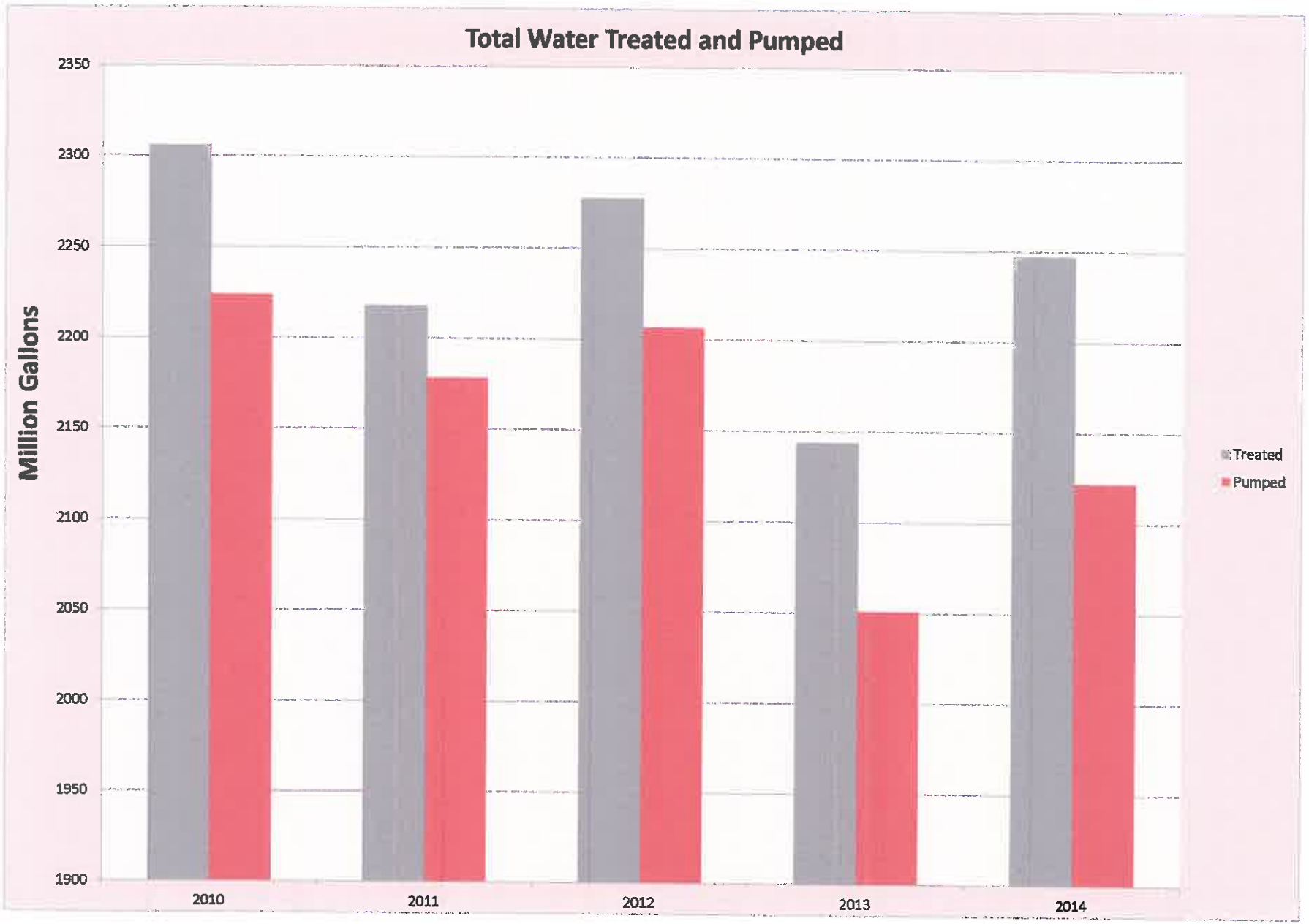
City of Findlay Water Treatment Plant Annual Report

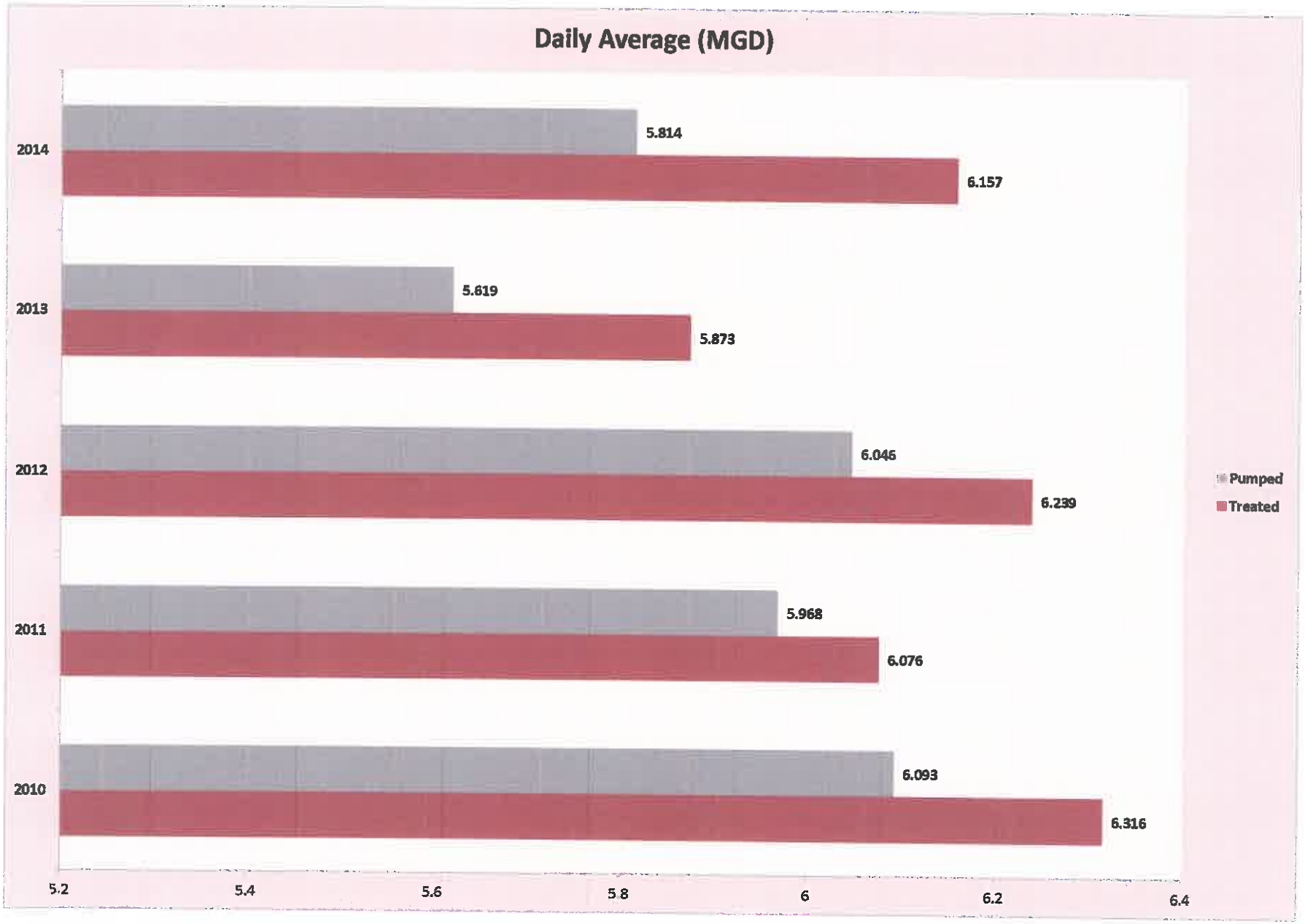
Month	Water Pumped MG	Water Treated MG	Pounds Lime	Gallons Ferric Chloride	Pounds Soda Ash	Pounds Fluoride	Pounds Carbon Dioxide	Gallons Sodium Hypochlorite	Gallons Sodium Permanganate	Pounds Carbon
January	172.03	179.94	162544	2173	25362	5557	46616	3384	0	3027
February	162.98	167.41	146688	2141	23719	5072	42495	3259	0	1460
March	175.3	176.57	158711	2237	25140	5234	42891	3259	0	1440
April	166.98	167.89	138504	2122	23568	5268	39967	3175	3870	1370
May	187.63	197.67	181599	2539	28410	6327	45034	3691	841	2628
June	193.06	212.69	200320	2863	31048	6960	50816	4708	962	3766
July	198.42	220.07	213180	2991	32257	7303	52298	6174	969	5419
August	192.32	204.41	191694	2631	29485	6784	45925	4822	1189	4949
September	177.56	191.3	192401	2650	27333	6341	44446	4463	1121	5627
October	166.03	181.54	176720	2251	23070	6003	44857	3677	808	10707
November	168.68	175.98	169149	1757	24948	5401	46898	2997	827	5577
December	161.26	171.82	164427	1434	21177	5139	47781	3421	562	0
Totals	2122.25	2247.29	2095937	27789	315517	71389	550024	47030	11149	45970
Monthly Avg	176.85	187.274167	174661	2316	26293	5949	45835	3919	929	3831
Max	198.42	220.07								
Min	161.26	167.41								
cost/gallon								$ 0.70	$ 7.03	
Cost/ton			$ 148.00	$ 615.00	$ 378.82	$ 562.85	$ 63.00			$ 1,940.00
annual chemical cost			$ 155,099	$ 32,557	$ 59,762	$ 20,091	$ 17,326	$ 32,874	$ 78,405	$ 44,591

total chemical cost $ 440,705


2014 Reservoir Levels
818
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)
$250
$200
$150
$100
$50
$0
2010
2011
2012
2013
2014
Treated
Pumped


Total Water Treated and Pumped
Million Gallons
2350
2300
2250
2200
2150
2100
2050
2000
1950
1900
2010
2011
2012
2013
2014
Treated
Pumped


Daily Average (MGD)
2014
2013
2012
2011
2010
5.814
6.157
5.619
5.873
6.046
6.239
5.968
6.076
6.093
6.316
5.2
5.4
5.6
5.8
6
6.2
6.4
Pumped
Treated

WATER TREATMENT EXPENSES

	2010	2011	2012	2013	2014
Wages	$ 805,733	$ 804,666	$ 788,696	$ 717,150	$ 688,792
Retirement Settlements	$ 113,112		$ 160,945		
Benefits	$ 291,253	$ 347,446	$ 388,463	$ 329,426	$ 253,925
Operating	$ 383,624	$ 377,501	$ 389,093	$ 351,698	$ 445,237
Maintenance	$ 181,905	$ 219,071	$ 151,475	$ 95,083	$ 151,228
Utilities	$ 211,290	$ 223,104	$ 252,719	$ 225,952	$ 282,724
Capital	$ 91,867	$ 19,257	$ 6,437		$ 50,756
Other	$ 80,512	$ 35,706	$ 95,263	$ 91,654	$ 35,689
TOTAL	$ 2,159,296	$ 2,026,751	$ 2,233,091	$ 1,810,963	$ 1,908,351

SUPPLY RESERVOIR EXPENSES

	2010	2011	2012	2013	2014
Wages	$ 43,735	$ 45,490	$ 47,580	$ 49,664	$ 50,056
Retirement Settlements					
Benefits	$ 21,787	$ 27,016	$ 32,227	$ 33,212	$ 23,693
Operating	$ 74,212	$ 81,406	$ 115,131	$ 130,931	$ 67,175
Maintenance	$ 119,290	$ 55,590	$ 141,596	$ 57,816	$ 28,314
Utilities	$ 70,436	$ 90,709	$ 94,624	$ 96,982	$ 90,257
Capital				$ 5,812	
Other	$ 8,347	$ 7,005	$ 28,539	$ 12,342	$ 21,852
TOTAL	$ 337,807	$ 307,216	$ 459,697	$ 386,759	$ 281,346