2010 Annual Report

Water Treatment Plant & Supply Reservoir



High service and low service pumping station



ANNUAL REPORT FOR 2010

The annual report of operations of the Water Treatment Plant and Supply Reservoir for the year ending December 31, 2010 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 Water Treatment Plant has experienced some changes this year with two retirements and one transfer. Scott Shellhammer retired as Superintendent at the end of June after 34 years of service and Max Jurrus retired as an Operator at the end of December with 22 years of service. Dean Adler, who was an Operator at the water treatment plant, transferred to the Utility Billing office and is now serving as their new supervisor.

The following is a list of the current water treatment and supply reservoir staff along with their position and years of service with the City of Findlay.

Water Treatment Plant Employees

Jeff Newcomer	Superintendent, Class IV	27 years
Paul Brown	Supervisor, Class III	25 years
Larry Snodgrass	Operator, Class I	26 years
Rick Parker	Operator, Class III	10 years
Rob Householder	Operator, Class I	7 years

Mark Burkholder Jr.	Operator, OIT Class I	5 months
Dan Bond	Operator, OIT Class I	5 months
Randy Zacharias Sr.	Operator, OIT Class I	1 month
Brett Young	Lab Tech II, Class III	11 years
Tim Couch	Lab Tech I, Class II	8 years
Dean Hoge	Assistant Operator	22 years
Tim Foust	Assistant Operator	11 years
Brian Egts	Maintenance Mechanic II	21 years
Chip Flanagan	Maintenance Mechanic II	11 years
Brad Eblen	Maintenance Mechanic I	20 years
Marina Vielhaber Zachea	Secretary	8 years

Supply Reservoir

Rich Cap Maintenance Mechanic I 10 years

2010 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

- Replace the bearings and mechanical seals on high service pump #1
- Install a new 10" ball valve and actuator on high service pump #1
- Install a new ball valve and actuator on high service pump #3
- Install a new actuator on high service pump #4
- Installed new radar level transmitters on lime silo #1 and #2

- Repaired and inspected the switchgear to the generator
- Installed new actuator on filter influent #2
- Installed new actuator on filter influent #7
- Installed new actuator on filter drain #9
- Emergency concrete repair on the 1931 and 1965 influent flume

Lab items

- Completed and submitted the initial distribution system evaluation (IDSE)
- Completed initial round of source water monitoring
- Completed lead and copper testing in the distribution system
- Passed bacteria and chemical surveys
- Perform bacteria analysis for both public and private water sources

Reservoir items

- Sodium permanganate building completed
- Started feeding sodium permanganate
- Treated the reservoirs during the months of May, July and August
- Placed 4,000 tons of rip-rap in reservoir #2
- Concrete work at #3 raw water pumping station

Other items

- Started filter rehab project in December
- Completed design work for Solid Contact Units
- Hired 3 new operators
- Purchased a new semi for sludge hauling
- Painted surface wash system in filters 1 thru 7

Goals for 2011

- Replace Solid Contact Unit #2
- Replace underground diesel tank with above ground tank
- Inspect outlet structures at reservoirs
- Fix sluice gates at reservoir structures
- Fix concrete on re-carbonation basin at WTP
- Fix concrete on #2 raw water pump station
- Install new actuator on HSP #2
- Install radar level transmitter on soda ash

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 his 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 2009

Superintendent Scott Shellhammer Mayor Pete Sehnert Service Director Bruce Hardy

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 which 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 2009. Samples were collected for 63 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	Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Bacteriological	 	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			•	
Total Organic Carbon (ppm)	NA	TT	2.3	1.7 – 3.3	NO	2009	Naturally present in the environment.
The value reported under percentage of TOC requirequirements. A value of	ired to be re	moved. A	value of gi	reater than one (1) indicates t	that the wate	en percentage of TOC actually removed to the er system is in compliance with TOC removal
Turbidity (NTU)	NA	TT	0.28	0.05 0.28	NO	2009	Soil runoff.
Turbidity (% meeting standard)	NA	TT	100%	100% — 100%	NO	2009	
is 0.3 NTU in 95% of the	daily samp	les and sh	all not exc	eed 1 NTU at an	y time. As rej	ported abov	tration system. The turbidity limit set by the EPA the Findlay Water Department's highest ng the turbidity limits was 100%.
Contaminants (Units)	MCLG	MCL	Level Found	Range of Detections	Violation	Sample Year	Typical Source of Contaminants
Radioactive Contaminant	ts .						
Gross Alpha (pCi/L)	0	15	0.584	NA	NO	2006	Erosion of natural deposits.
Gross Beta (pCi/L)	0	AL=50	6.8	NA	NO	2003	Decay of natural and man-made deposits.
EPA considers 50pCi/L to	o be the lev	el of conce	em for beta	particles.			
norganic Contaminants							
Copper (ppm)	1.3	AL=1.3	0.110	NA	NO	2007	Corrosion of household plumbing systems; Erosion of natural deposits.
	Zero out o	of 30 samp	les was fo	und to have cop	per levels in (excess of th	e Action Level of 1.3 ppm.
Fluoride (ppm)	4	4	1.01	0.77 - 1.18	NO	2009	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Lead (ppb)	o	AL=15	<2.0	NA.	NO	2007	Corrosion of household plumbing systems; Erosion of natural deposits.
	Zero out o	of 30 samp	les was fo	und to have lead	l levels in exc	cess of the /	Action Level of 15 ppb.
Nitrate (ppm)	10	10	0.90	0.20 - 0.90	NO	2009	Runoff from fertilizer use; Leaching from septi tanks, sewage; Erosion of natural deposits.
Volatile Organic Contami	nants						
Bromodichloromethane (ppb)	NA	NA	7.5	NA	NO	2009	By-product of drinking water chlorination.
Chloroform (ppb)	NA.	NA	12.0	NA	NO	2009	By-product of drinking water chlorination.
Dibromochloromethane (ppb)	NA	NA	2.7	NA	NO	2009	By-product of drinking water chlorination.
Haloacetic Acids (HAA5) (ppb)	NA	60	21.2	10.7 – 32.5	NO	2009	By-product of drinking water chlorination.
Total Trihalomethane TTHM) (ppb)	NA	80	49.6	27.8 – 67.4	NO	2009	By-product of drinking water chlorination.
IDSE HAA5 (ppb)	NA	NA	NA	11.2 – 30.8	NO	2009	By-product of drinking water chlorination.
DSE TTHM (ppb)	NA	NA	NA	19.1 – 68.6	NO	2009	By-product of drinking water chlorination.
Residual Disinfectants							
Fotal Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.39	1.17 – 1.57	NO	2009	Water additive used to control microbes.

IDSE Monitoring Results

Under the Stage 2 Disinfectants/Disinfection Byproducts Rule (D/DBPR), our public water system was required by USEPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE), and is intended to identify locations in our distribution system with elevated disinfection byproduct concentrations. The locations selected for the IDSE may be used for compliance monitoring under Stage 2 DBPR, beginning in 2013. Disinfection byproducts are the result of providing continuous disinfection of your drinking water and from when disinfectants combine with organic matter naturally occurring in the source water. Disinfection byproducts are grouped into two categories, Total Trihalomethanes (TTHM) and Haloaetic Acids (HAA5). USEPA sets standards for controlling the levels of disinfectants and disinfectant byproducts in drinking water, including both TTHMs and HAA5s.

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

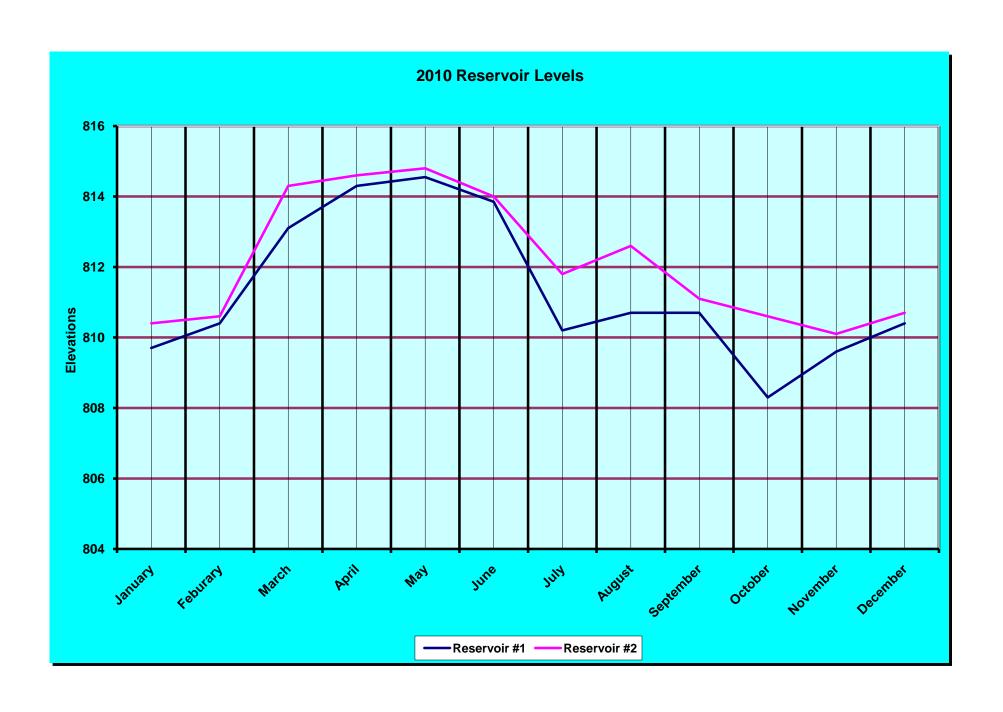
We have a current, unconditioned license to operate our water system.

How do I participate in decisions concerning my drinking water?

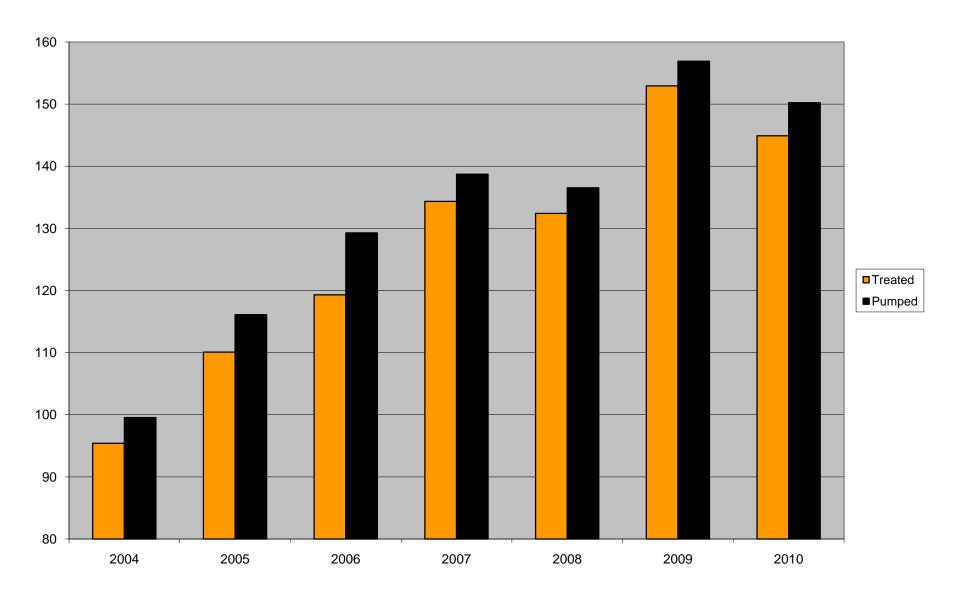
If you have any questions about this report or concerning your water utility, please contact Scott Shellhammer by calling (419) 424-7193 or by writing to 110 North Blanchard Street, Findlay, OH 45840. We want our valued customers to be informed about their water utility. You can attend regular public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

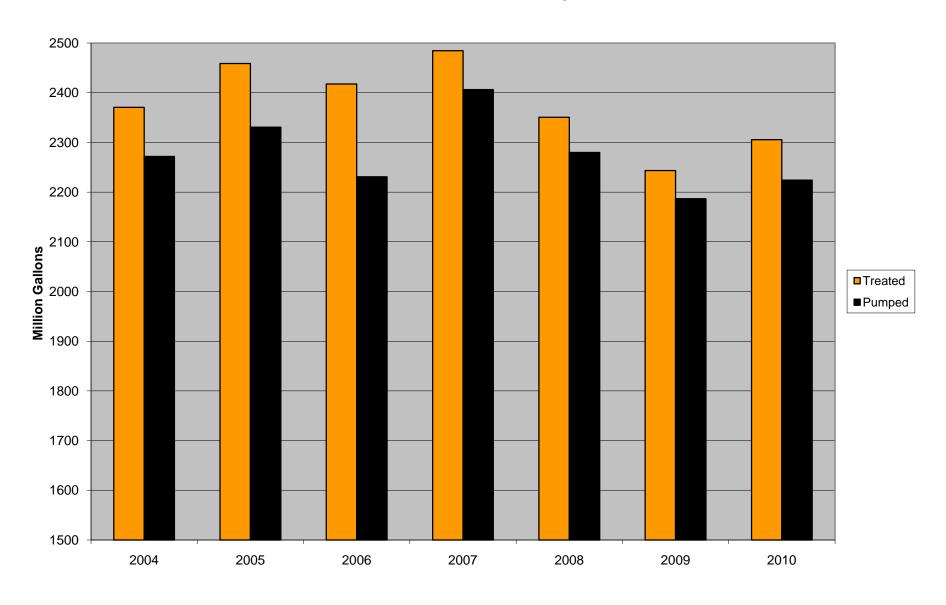
- Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- Maximum Contaminant level (MCL): The highest level of contaminant that is allowed in drinking water. MCLs are set as close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



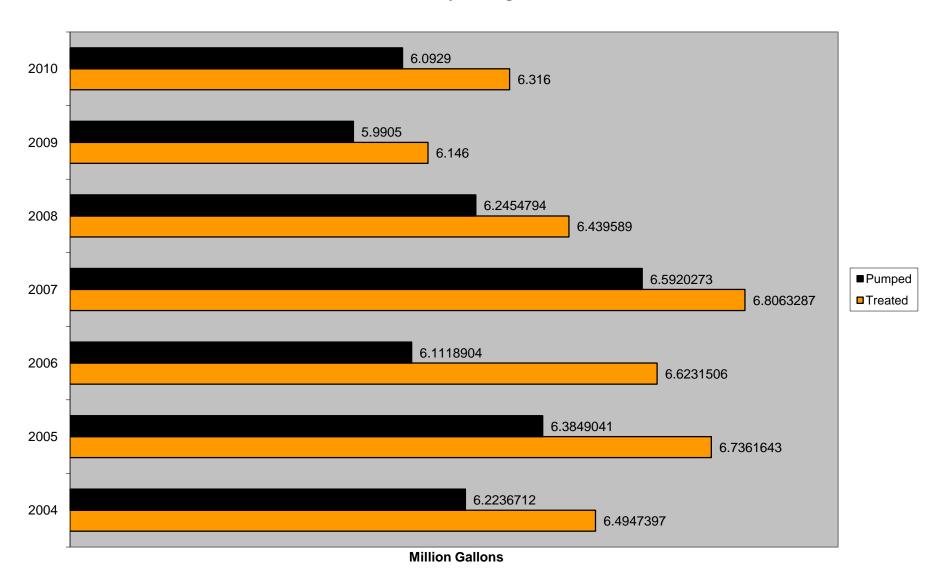
Chemical Cost per MG (Million Gallons)



Total Water Treated and Pumped



Daily Average



Expense Comparision

WATER TREATMENT EXPENSES

	2007	2008	2009	2010		
Wages	\$ 855,183	\$ 854,863	\$ 816,854	\$	805,733	
Retirement Settlements	\$ -	\$ 4,705		\$	113,112	
Benefits	\$ 290,773	\$ 296,666	\$ 338,486	\$	291,253	
Operating	\$ 387,661	\$ 417,424	\$ 384,748	\$	383,624	
Maintenance	\$ 168,787	\$ 187,993	\$ 115,276	\$	181,905	
Utilities	\$ 222,294	\$ 239,140	\$ 211,417	\$	211,290	
Capital	\$ 57,775	\$ 39,918	\$ -	\$	91,867	
Other	\$ 114,586	\$ 100,554	\$ 108,879	\$	80,512	
TOTAL	\$ 2,097,058	\$ 2,141,262	\$ 1,975,661	\$	2,159,296	

SUPPLY RESERVOIR EXPENSES

	\$ 2,007	\$ 2,008	\$ 2,009	\$ 2,010
Wages	\$ 39,101	\$ 42,549	\$ 42,907	\$ 43,735
Retirement Settlements	\$ -	\$ -	\$ -	\$ -
Benefits	\$ 17,278	\$ 18,397	\$ 21,721	\$ 21,787
Operating	\$ 79,571	\$ 34,238	\$ 32,323	\$ 74,212
Maintenance	\$ 107,777	\$ 18,509	\$ 33,426	\$ 119,290
Utilities	\$ 59,128	\$ 62,949	\$ 70,291	\$ 70,436
Capital	\$ -	\$ 42,308	\$ 9,316	
Other	\$ 18,345	\$ 6,705	\$ 7,161	\$ 8,347
TOTAL	\$ 321,199	\$ 225,655	\$ 217,144	\$ 337,808

2010 Chemical Report

Month	Water Pumped MG	Water Treated MG	Pounds	Gallons Ferric Chloride	Pounds Soda Ash	Pounds Fluoride	Pounds Carbon Dioxide	Gallons Chlorine	Pounds Potassium Permanganate	Pounds Polymer	Gallons Sodium Permanganate	Total Mo	onthly Chem	ical Cost Treated
WOTHT	IVIG	IVIG	LIIIIC	Chloride	ASII	i idolide	Dioxide	Chlorine	1 emianganate	1 Olyllici	i eimanganate	cost	Cost/MG	Cost/MG
January cost/chemical	179.92	182.41	140484 8920.73	1984 2029.60	17820 3357.47	5443 1952.40	38585 1475.88	3493 2183.13	1367 2993.73	29 58.87		22971.81	127.68	125.94
February cost/chemical	163.58	164.31	142905 9074.47	2006 2052.11	15180 2860.06	4900 1757.63	31996 1223.85	2935 1834.38	1380 3022.20	26 52.78		21877.47	133.74	133.15
March cost/chemical	176.45	176.76	155381 9866.69	1754 1794.32	17480 3293.41	5272 1891.07	35590 1361.32	3096 1935.00	1486 3254.34	28 56.84		23452.98	132.92	132.68
April cost/chemical	175.91	180.74	149262 9478.14	2080 2127.81	25655 4833.66	5563 1995.45	39896 1526.02	3210 2006.25	1420 3109.80	29 58.87		25135.99	142.89	139.07
May cost/chemical	189.65	192.29	186859 11865.55	1954 1998.91	27614 5202.75	6130 2198.83	46292 1770.67	3455 2159.38	1613 3532.47	31 62.93		28791.49	151.81	149.73
June cost/chemical	187.93	201.6	186540 11845.29	2062 2109.40	29276 5515.89	6486 2326.53	47867 1830.91	3735 2334.38	1689 3698.91	32 64.96		29726.26	158.18	147.45
July cost/chemical	211.73	231.75	249828 15864.08	2378.4 2433.07	34213 6446.07	7467 2678.41	53604 2050.35	5160 3225.00	1942 4252.98	37.5 76.13		37026.09	174.87	159.77
August cost/chemical	208.02	232.57	209327 13292.26	2402 2457.21	34247 6452.48	7362 2640.75	51260 1960.70	5078 3173.75	1741 3812.79	38 77.14	122 869.25	34736.33	166.99	149.36
September cost/chemical	202.18	207.58	193485 12286.30	2179 2229.08	30160 5682.45	6422 2303.57	48753 1864.80	5013 3133.13	1025 2244.75	33 66.99		32333.32	159.92	155.76
October cost/chemical	188.56	189.39	158771 10081.96	1955 1999.94	27301 5143.78	5882 2109.87	50067 1915.06	4290 2681.25	747 1635.93	30 60.90	384 2736.00	28364.69	150.43	149.77
November cost/chemical	167.24	168.87	144789 9194.10	1757 1797.38	23636 4453.26	5233 1877.08	39987 1529.50	3311 2069.38	725 1587.75	27 54.81	344 2451.00	25014.26	149.57	148.13
December cost/chemical	172.75	177.3	129537 8225.60	1813 1854.67	25004 4711.00	5490 1969.26	42120 1611.09	3269 2043.13	835 1828.65	29 58.87	330 2351.25	24653.52	142.71	139.05
Totals	2223.92	2305.57	2047168	24324	307586	71650	526017	46045	15970	370	1534			
Monthly Avg	185.33	192.13083	170597	2027	25632	5971	43835	3837	1331	30.79	306.80	•		
Max Min	211.73 163.58	232.57 164.31												
cost/gallon Cost/ton	. 30.00		127.00	537.00	376.82	717.40	76.50	0.625	4380.00	4060.00	7.125			
annual chem	nical cost		\$ 129,995	\$ 24,883	\$ 57,952	\$ 25,701	\$ 20,120	\$ 28,778	\$ 34,974	\$ 750	\$ 10,930	\$ 334,084		
cost/MG													\$ 150.22	\$ 144.90

Water Treated Water Pumped

	2006	2007	2008	2009	2010		2006	2007	2008	2009	2010	
Treated MG	195.48	189.58	184.07	184.01	182.41	January	183.4	177.76	177.04	188.47	179.92	Pumped MG
Cost/MG	\$ 125.75	\$ 117.44	\$ 130.86	\$ 148.48	\$ 125.94		\$ 134.03	\$ 125.25	\$ 136.06	\$ 144.96	\$ 127.68	Cost/MG
						= =	_					-
Treated MG	176.82	186.28	176.9	167.21	164.31	February	171.08	177.41	171.52	169.05	163.58	Pumped MG
Cost/MG	\$ 125.08	\$ 119.54	\$ 119.56	\$ 143.18	\$ 133.15		\$ 129.28	\$ 125.52	\$ 123.31	\$ 141.62	\$ 133.74	Cost/MG
						1						Ī
Treated MG	191.92	196.14	191.62	186.48	176.76	March	181.53	190.47	183.53	178.83	176.45	Pumped MG
Cost/MG	\$ 107.62	\$ 119.52	\$ 122.70	\$ 155.03	\$ 132.68		\$ 113.78	\$ 123.08	\$ 128.11	\$ 161.66	\$ 132.92	Cost/MG
Trooted MC	107.07	10F F0	100 F 4	101.67	100.74	Anril	171 70	100.0	100.26	10F 00	175.01	Dumned MC
Treated MG Cost/MG	187.97 \$ 105.57	185.53 \$ 114.77	190.54 \$ 117.64	181.67 \$ 150.03	180.74 \$ 139.04	April	171.78 \$ 115.52	182.9 \$ 116.39	180.36 \$ 124.28	165.20 \$ 164.98		Pumped MG Cost/MG
COSI/IVIG	φ 103.57	р 114.77	φ 117.04	φ 130.03	φ 139.04	J	φ 115.52	φ 110.39	φ 124.20	φ 104.90	φ 142.09	COSI/IVIG
Treated MG	202.77	222.74	209.39	186.27	192.29	May	184.54	212.62	195.72	178.46	189.65	Pumped MG
Cost/MG	\$ 108.47	\$ 122.76	\$ 125.56	\$ 161.92	\$ 149.73	1	\$ 119.19	\$ 128.60	\$ 134.33	\$ 169.00		Cost/MG
		•	·	·		4				•		_
Treated MG	209.67	260.54	210.38	192.69	201.6	June	187.63	250.7	198.62	185.62	187.93	Pumped MG
Cost/MG	\$ 131.07	\$ 145.15	\$ 132.12	\$ 162.98	\$ 147.75	1	\$ 146.47	\$ 150.85	\$ 139.94	\$ 169.19	\$ 158.18	Cost/MG
						-						•
Treated MG	223.42	248.08	222.07	207.13	231.75	July	197.78	242.54	213.83	200.88	211.73	Pumped MG
Cost/MG	\$ 122.23	\$ 152.82	\$ 150.68	\$ 169.26	\$ 159.77		\$ 138.07	\$ 156.31	\$ 156.49	\$ 174.53	\$ 174.87	Cost/MG
						5 .						L
Treated MG	245.06	224.92	224.92	211.1	232.57	August	229.8	222.78	222.06	202.26		Pumped MG
Cost/MG	\$ 124.86	\$ 151.31	\$ 149.33	\$ 167.12	\$ 145.62		\$ 133.15	\$ 152.77	\$ 151.25	\$ 174.42	\$ 162.81	Cost/MG
Treated MG	205.60	214.18	199.22	201.44	207.58	September	182.71	206.21	196.31	200.74	202.18	Pumped MG
Cost/MG	\$ 128.67	\$ 155.17	\$ 159.20	\$ 157.76		September	\$ 144.79	\$ 161.17	\$ 161.56	\$ 158.31		Cost/MG
COSTAIC	ψ 120.07	ψ 100.17	ψ 100.20	ψ 107.70	ψ 140.01	<u>I</u>	Ψ 144.70	ψ 101.17	Ψ 101.00	ψ 100.01	Ψ 1+1.40	COSTINIC
Treated MG	200.99	203.44	187.93	182.24	189.39	October	181.66	196.02	187.60	178.75	188.56	Pumped MG
Cost/MG	\$ 126.98	\$ 144.57	\$ 138.24	\$ 136.78	\$ 135.32	1	\$ 140.50	\$ 150.04	\$ 138.49	\$ 139.45	\$ 135.92	Cost/MG
												1
Treated MG	193.22	174.91	171.39	166.55	168.87	November	182.78	173.46	173.28	164.39	167.24	Pumped MG
Cost/MG	\$ 108.66	\$ 129.71	\$ 126.65	\$ 141.51	\$ 133.61		114.87	\$ 130.79	\$ 125.26	\$ 143.37	\$ 134.92	Cost/MG
						■.						•
Treated MG	184.53	177.97	182.02	176.62	177.3	December	176.15	173.22	179.73	173.90		Pumped MG
Cost/MG	\$ 112.94	\$ 123.89	\$ 106.96	\$ 133.00	\$ 125.79	j	118.31	\$ 127.89	\$ 108.32	\$ 135.08	\$ 129.10	Cost/MG
T 1240	0447.45	0404.04	0050.45	0040.44	0005		0000.04	0.400.00	0070.0	0400 55	0000.55	D
Treated MG	2417.45	2484.31	2350.45	2243.41	2305.57	yearly	2230.84	2406.09	2279.6	2186.55	2223.92	Pumped MG
Cost/MG	\$ 119.30	\$ 134.34	\$ 132.41	\$ 152.94	\$ 144.90	comparison	\$ 129.28	\$ 138.71	\$ 136.52	\$ 156.91	\$ 150.22	Cost/MG

front filters off line for repair, washed more filters, lost some water through leaky gate valves