

CITY OF FINDLAY

WATER POLLUTION CONTROL CENTER



2012 ANNUAL REPORT

January 22, 2013

Mr. Paul E. Schmelzer, PE, PS
Service/Safety Director
City of Findlay, Ohio

Dear Mr. Schmelzer,

The annual report of operations of the Water Pollution Control Center for the year ending December 31, 2012 is respectfully submitted here in. The year 2012 saw the retirement of Marge Mize as the Administrative Assistant with twelve years of service to the City. I personally want to thank Marge for her help and assistance during her time as my assistant. I also wish to acknowledge the cooperation within the department and the initiative exhibited by the 15 Water Pollution Control and 12 Sewer Maintenance employees in their outstanding operation and maintenance of the wastewater system throughout the year 2012.

Sincerely,

Randy L. Greeno
WPC Superintendent

The following is a list of all the employees that make the Water Pollution Control Center (WPCC) function at such a high level of professionalism:

Raul Amesquita	Joe Arras
Dave Beach	Seth Cole
Bob Courtney	Dana Cramer
George Elston	Dave Frantz
Joshua Gearing	Dan Gonzalez
Terry Grohoske	Gary Hayden
Dave Holman	Chris Kolhoff
Amanda Mooney	Tom Moses
Doug Reed	Werner Roesch
Mark Routzon	Jason Sims
Jared Sines	Mark Stears
Mike Stillberger	Brent Vaughan
Todd Ward	Jason Wolfarth
Steve Watkins	

2012 WATER POLLUTION CONTROL CENTER ANNUAL REPORT

The Water Pollution Control Center (WPCC) is comprised of two units, Water Pollution Control and Sewer Maintenance. Each unit is independently operated with separate budgets under the direction of the Superintendent of the Water Pollution Control Center (WPCC).

In the year 2012 the City of Findlay WPCC completed its seventy-ninth year of operation. I am pleased to announce that there were zero violations of the city's NPDES permit during the year.

The City of Findlay WPCC treated 3.644 billion gallons of sewage in 2012 which was down from 2011's total of 5.193 billion gallons. The daily total for sewage treated was 9.957 million gallons per day in 2012, down from 2011's daily average of 14.215 million gallons per day.

The City of Findlay WPCC partnered with Marathon Petroleum Corporation on a 1 megawatt solar array project located at the WPCC facility. The project consisted of tracking and fixed solar panels from both SHARP and KYOCERA brands. Over 6,000 solar panels were used to complete this project which went on line and started producing power in November of 2012. At the time of this report the WPCC does not have accurate data established as to what the cost savings will be at the WPCC facility. The WPCC is hoping for a sixth of our electric energy use to be supplemented by this solar project which could equate to a \$50,000 to \$70,000 a year savings for the City of Findlay. As WPC Superintendent I would like to thank Marathon Petroleum Corporation and its employees involved with this project for their dedication, devotion and professionalism toward this project.

The City of Findlay has continued to work on the Long Term Control Plan for Combined Sewer Overflows and reducing the frequency of these overflows. The

long term goal is to close down as many CSO discharge points as possible. The Sewer Maintenance Department has been observing several overflow sites that could possibly be closed in the future but with the lack of significant rainfall events, it has been difficult to determine if the sites are active or not, thus no overflows were closed in 2012. The sewer lining program continues to move forward, with the bidding on lining of 4,712 feet of sewer in 2012 with the actual lining to be done in early 2013. Chemical root treatment was conducted on 4,109 feet of sewer during 2012. The Public Works department removed 2,688 tons of debris from the streets in 2012, thus preventing this pollution from entering into the storm sewer system and then into the receiving streams.

The WPC partnered with City of Findlay Health Department, Hancock County Board of Alcohol, Drug Addiction, and Mental Health Services, The University of Findlay, Findlay Police Department, and Rader Environment Services for two prescription drug/mercury collection days. These days allowed the citizens of Findlay and Hancock County to dispose of their unwanted prescription drugs properly instead of flushing them down their toilets. Both collections were highly successful in collecting and disposing of thousands of units. These collections brought in 21 mercury thermometers, 3 mercury switches, and hundreds of pounds of unused medication which were all disposed of safely and properly. With the continued success of these collections, at this time one more is scheduled for April 2013. The two permanent collection boxes that were installed in 2011, at the Hancock County Sheriff's office and the City of Findlay Police department, have been highly successful and may allow us to reduce to only one drive-up collection per year.

In 2012 the City of Findlay continued to work on its Storm Water Management Plan. This plan addresses the following six minimum controls which were set forth by the OEPA:

- ◆ Public Education and Outreach
- ◆ Public Participation and Involvement
- ◆ Illicit Discharge Detection and Elimination
- ◆ Construction Site Runoff Control
- ◆ Post Construction Storm Water Management

◆ Pollution Prevention and Good Housekeeping

Each of these controls must have BMPs (Best Management Practices) or activities which have measurable goals. Each of these goals must have an implementation schedule to track the progress of the activities that are being achieved. One of the most noticeable activities for 2012 were the distribution of storm water pollution fliers in the water and sewer bills thus alerting the residents of the community of the hazards of storm water pollution and how they can prevent this type of pollution. Development of an Illicit Discharge and Illegal Connection Control Ordinance was developed and is in final draft review as this report is being submitted. Outfall recon continues on the Blanchard River and its tributaries. This recon documents all conduits of storm water that may reach the Blanchard River including pipes, swales and ditches. This investigation documents size, type of conduit, flow activities and any other pertinent information about the site. This information will help in the investigation of illicit discharges and illegal hook ups that could cause pollution in the receiving streams.

The WPCC staff continues to present storm water programs and tours for school age kids. These programs focus on pollution prevention and ways that we can keep our storm water system cleaner and how kids can help around their houses to achieve this goal.

Citizen volunteer groups, University of Findlay students and members of the Blanchard River Watershed Partnership performed several river clean-ups throughout 2012. The clean-ups were highly successful with the volunteers removing several hundred car and trucks tires along with miscellaneous items which weighed in at well over a ton. These clean-ups were conducted in a stretch of the river just west of the old Liberty Street dam to west of I-75.

Laboratory testing, to assure compliance with the NPDES permit limits, is performed at the WPCC and several outside laboratories. Two full-time laboratory technicians are required to monitor the specified parameters. It should be noted that the WPCC laboratory received an acceptable rating on all parameters that were tested for pertaining to the annual DMR-QA (Discharge

Monitoring Report & Quality Assurance) study. This study involves purchasing samples with unknown values and running the tests through our lab. The results are then sent back to the company for evaluation and the evaluation is then forwarded to the USEPA.

The WPCC is well staffed with the following 14 employees, licensed by the Ohio Environmental Protection Agency;

Waste Water Operator Licenses:

Randy Greeno	Class 4	Dave Beach	Class 3
David Frantz	Class 3	Mark Stears	Class 3
Raul Amesquita	Class 3	Jason Wolfarth	Class 3
Seth Cole	Class 3	Werner Roesch	Class 2
Josh Gearing	Class 1	Jason Sims	Class 1

Waste Water Collection Licenses:

Robert Courtney	Class 1	Chris Kolhoff	Class 1
Mark Routzon	Class 1	Mike Stillberger	Class 1

The WPCC has an approved Ohio Environmental Protection Agency Sludge Management Plan and continues to meet all state and federal regulatory requirements for disposal in a landfill. The wastewater biosolids (sludge) generated at the WPC is conditioned on four belt filter presses located in the Solids Processing Building. 1735.78 dry tons of biosolids were treated and disposed of at the Hancock County Landfill in 2012. This treatment resulted in an average of 10.92 dry tons per day of operation of the belt filter presses.

The Water Pollution Control Center has an approved Ohio Environmental Protection Agency Industrial Pretreatment Program. The Water Pollution Control Center is the legal authority responsible for the management, testing and record keeping of the program. Audits of the program and industrial files are performed annually by the Northwest District Office of the Ohio EPA and tri-annually by the State Office of the Ohio EPA. Inspection reports from all EPA agencies have been above average and the City of Findlay is meeting all federal requirements at this time.

The City of Findlay pretreatment program has continued the excellent cooperative spirit with local industries toward successful pretreatment of their individual discharges. At present, all industrial dischargers are in compliance with current regulations and their continued cooperation is anticipated.

On September 19, 1934 the Sewage Treatment Works became a National Weather Service station for the City of Findlay and that tradition continues today at the Water Pollution Control Center. Weather records are on file dating back to 1894 for temperature, precipitation amounts, wind direction and sky conditions. Flood information is supplied to the news media when river levels pose a threat to the community. Fortunately the Blanchard River did not exceed flood stage during the year of 2012.

On January 20th, the City of Findlay recorded 4 degrees above zero as the lowest temperature of the year. The highest temperature of the year was recorded on June 28th when the mercury reached 102 degrees. The year 2012 recorded a total of twenty seven days at 90° or above compared to twenty six days in 2011 and twenty days in 2010. The temperature also reached above 100° on three separate occasions. The year 2012 recorded no days at 0° or below which compares to two days below zero in 2011. During the year of 2012, seven high temperature records were broken or tied and no low temperature records were broken or tied. These records can be found on the Temperature and Precipitation Data sheet included in this annual report. The historical record low temperature of minus 21° was recorded on January 13, 1912 and February 20, 1929. The highest temperature on record was 109° recorded on July 24, 1934.

Total precipitation for 2012 was 31.64 inches, which was 4.36 inches below the one-hundred eighteen year average of 36.00 inches. August had the greatest amount of monthly precipitation at 4.55 inches and the month of November had the least at 0.80 inches. The month of November's recorded amount of 0.80 inches of precipitation was the fourth driest November in history with the all-time driest November being in 1926 at 0.28 inches. January 17th recorded the largest single day rainfall at 1.55 inches.

The following are all days in 2012 that one inch or more of rainfall was recorded in a 24 hours period:

January 17 th	1.55"
August 10 th	1.35"
June 1st	1.34"
August 27 th	1.13"
August 14 th	1.09"

The WPC recorded 174 days with precipitation which accounts for 47.5% of the days in 2012. Out of those 174 days, 135 days or 77.6% had measurable amounts of precipitation of more than 0.01".

The year 2012 recorded a total snowfall of 19.4 inches, which is 7.0 inches below the average. The month of December was the snowiest month with 7.9 inches recorded.

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2012

TEMPERATURE AND PRECIPITATION

MONTH	TEMPERATURE				PRECIPITATION			
	AVERAGE MAXIMUM°		AVERAGE MINIMUM °		TOTAL "		SNOWFALL "	
	2011	2012	2011	2012	2011	2012	2011	2012
JANUARY	28.3	37.8	14.5	23.4	1.22	3.12	9.3	5.2
FEBRUARY	34.9	41.0	19.8	26.1	4.32	1.78	16.2	5.3
MARCH	45.6	62.5	28.9	41.5	2.89	1.99	3.2	0.8
APRIL	59.5	61.6	40.2	39.1	5.47	1.86	T	T
MAY	71.2	78.8	52.9	55.2	7.39	1.61		
JUNE	81.8	83.4	61.6	59.6	1.83	3.01		
JULY	89.4	89.6	68.7	67.8	4.85	1.97		
AUGUST	81.8	82.3	62.0	60.8	5.29	4.55		
SEPTEMBER	71.4	73.3	53.7	52.9	7.52	3.89		
OCTOBER	63.2	60.4	43.8	43.6	4.00	4.23		T
NOVEMBER	54.5	49.3	37.5	30.1	5.47	0.80	0.4	0.2
DECEMBER	41.8	42.8	29.1	30.3	4.22	2.83	3.0	7.9
TOTAL					54.47	31.64	32.1	19.4
AVERAGE	60.3	63.6	42.7	44.2				
HISTORIC AVERAGE					36.03	36.00	26.5	26.4

NEW TEMPERATURE RECORDS:

February 29th 68° Old Record 1976 65° March 14th Tied 78° Record 1990 78°
 March 17th 76° Old Record 2003 74° March 19th 81° Old Record 1921 80°
 March 20th 82° Old Record 1918 77° March 21st 84° Old Record 1918 81°
 March 22nd 85° Old Record 1938 82°

2012

ANNUAL SUMMARY OF OPERATIONS

REMOVAL OF SUSPENDED SOLIDS

2012 RAW TO FINAL	2011 RAW TO FINAL
98.5%	98.2%

REMOVAL OF 5-DAY C.B.O.D.

(Carbonaceous Biochemical Oxygen Demand)

2012 RAW TO FINAL	2011 RAW TO FINAL
98.8%	98.1%

REMOVAL OF AMMONIA

2012 RAW TO FINAL	2011 RAW TO FINAL
99.4%	99.3%

REMOVAL OF TOTAL PHOSPHORUS

2012 RAW TO FINAL	2011 RAW TO FINAL
81.4%	86.6%

COST OF OPERATION

	2012	2011
PAYROLL & BENEFITS	\$ 1,261,254	\$ 1,300,395
UTILITIES (electric, water & sewage)	\$ 478,200	\$ 540,321
CHEMICALS	\$ 49,141	\$ 66,219
EQUIPMENT MAINTENANCE	\$ 89,805	\$ 170,581
MISCELLANEOUS	\$ 254,477	\$ 202,270
CAPITAL EQUIPMENT	\$ 57,753	\$ 44,700
TOTAL	\$ 2,190,630	\$ 2,324,423
COST PER MILLION GALLONS	\$ 601	\$ 448

2012

ANNUAL SUMMARY OF OPERATIONS

MONTH	FLOW		
	(Million Gallons)		
	TOTAL	AVG/DAY	PEAK
JANUARY	540.922	17.449	33 310
FEBRUARY	394.705	13.611	21.388
MARCH	377.262	12.170	20.405
APRIL	239.368	7.979	11.011
MAY	239.939	7.740	12.153
JUNE	228.984	7.633	16.126
JULY	217.655	7.021	9.733
AUGUST	265.168	8.554	18.526
SEPTEMBER	275.227	9.174	20.553
OCTOBER	309.966	9.999	20.087
NOVEMBER	252.010	8.400	13.373
DECEMBER	302.383	9.754	19.936
2012 TOTAL	3,643.589		
2012 AVERAGE	303.632	9.957	18.050
2011 TOTAL	5,193.734		
2011 AVERAGE	432.811	14.215	27.335

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ANNUAL SUMMARY OF OPERATIONS

MONTH	SUSPENDED SOLIDS MG/L		5-DAY CBOD MG/L		AMMONIA MG/L	
	RAW	FINAL	RAW	FINAL	RAW	FINAL
JANUARY	139	1.55	107	1.64	11.8	<0.10
FEBRUARY	212	2.00	129	1.57	13.0	<0.10
MARCH	118	1.95	103	1.32	12.4	<0.10
APRIL	155	3.48	148	1.95	18.3	<0.10
MAY	170	2.96	152	2.86	17.3	<0.10
JUNE	181	2.38	160	1.48	18.4	<0.10
JULY	181	2.77	163	1.41	18.5	<0.10
AUGUST	175	2.22	140	1.65	17.3	<0.10
SEPTEMBER	163	3.05	130	1.89	16.0	<0.10
OCTOBER	153	2.43	119	1.14	15.4	<0.10
NOVEMBER	146	2.36	142	1.50	17.1	<0.10
DECEMBER	154	2.86	135	1.81	16.1	<0.10
NPDES LIMIT (SUMMER) 5/01-10/31		14	N/A	10	N/A	1.4
NPDES LIMIT (WINTER) 11/01-4/30		18	N/A	13	N/A	4.2
2012 AVERAGE	162	2.50	136	1.69	16.0	<0.10
2011 AVERAGE	112	2	109	2	13.6	<0.10

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ANNUAL SUMMARY OF OPERATIONS

MONTH	TOTAL PHOSPHORUS		COD	E. COLI
	MG/L		MG/L	#/100ML
	RAW	FINAL	FINAL	FINAL
JANUARY	2.9	0.48	11	
FEBRUARY	4.2	0.53	12	
MARCH	2.6	0.62	12	
APRIL	3.6	0.71	17	
MAY	4.0	0.82	18	5
JUNE	4.4	0.80	13	9
JULY	4.3	0.85	12	100
AUGUST	3.7	0.82	15	108
SEPTEMBER	3.8	0.87	14	41
OCTOBER	3.6	0.74	10	19
NOVEMBER	3.6	0.61	17	
DECEMBER	3.6	0.46	12	
NPDES LIMIT	N/A	1.00	N/A	#/100ML
2012 AVERAGE	3.7	0.69	14	47
2011 AVERAGE	2.9	0.39	15	130
2010 AVERAGE	3.8	0.35	20	

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ANNUAL SUMMARY OF OPERATIONS

MONTH	DISSOLVED OXYGEN (PPM)		
	FINAL EFFLUENT	BLANCHARD RIVER ABOVE	BLANCHARD RIVER BELOW
JANUARY	9.3	12.6	12.3
FEBRUARY	9.4	14.2	13.4
MARCH	9.4	14.4	13.6
APRIL	9.1	10.6	10.6
MAY	8.4	8.3	7.7
JUNE	8.1	7.6	7.0
JULY	7.9	5.7	5.1
AUGUST	7.8	3.8	4.7
SEPTEMBER	7.9	6.3	5.6
OCTOBER	8.4	8.6	8.3
NOVEMBER	8.8	12.5	11.8
DECEMBER	9.0	12.1	10.3
NPDES PERMIT (SUMMER) 5/01-10/31	6.7		
NPDES PERMIT (WINTER) 11/01-4/30	5.3		
2012 AVERAGE	8.6	9.7	9.2
2011 AVERAGE	8.6	10.5	10.0
2010 AVERAGE	8.6	9.9	9.2

2012

SOLIDS PROCESSING ANNUAL REPORT

MONTH	OPERATING HOURS				TOTAL OPERATING HOURS	AVERAGE COST \$/TON	POLYMER COST TOTAL,\$	POLYMER USAGE GALLONS	AVERAGE SOLIDS CAPTURE, %
	1	2	3	4					
JANUARY	135.50	30.50	94.25	121.50	381.75	18.13	2,962.29	255.37	99
FEBRUARY	130.00	93.50	37.25	126.75	387.50	17.77	3,000.70	258.68	99
MARCH	135.00	0	126.75	121.00	382.75	17.94	2,962.53	255.39	98
APRIL	113.00	45.75	60.25	102.75	321.75	19.32	2,489.35	214.60	98
MAY	108.25	97.75	0	98.50	304.50	18.96	2,355.62	203.07	99
JUNE	139.25	126.50	0	126.50	392.00	17.40	3,032.82	261.45	98
JULY	62.25	122.50	0	118.75	303.50	17.26	2,345.64	202.21	99
AUGUST	65.50	96.50	0	96.50	258.50	16.83	1,998.45	172.28	99
SEPTEMBER	0	149.75	0	142.75	292.50	16.68	2,257.47	194.61	99
OCTOBER	38.50	143.75	14.75	119.50	316.50	18.71	2,447.02	210.95	99
NOVEMBER	139.00	139.75	135.50	6.50	420.75	19.58	3,269.92	281.89	99
DECEMBER	92.50	102.50	60.75	27.00	282.75	19.63	2,194.95	189.22	98
TOTAL	1158.75	1148.50	529.50	1208.00	4044.75		31,316.76	2,699.72	
AVERAGE					337.06	18.18	2,609.73	224.98	99

Polymer \$11.60/gallon 2012 \$11.66/gallon 2013

2012

SOLIDS PROCESSING ANNUAL REPORT

MONTH	TOTAL SLUDGE DEWATER & SUPNT. GALLONS	DEWATERED SLUDGE GALLONS	SUPERNANT GALLONS	DEWATERED SLUDGE DRY TONS	AVG. SOLIDS	
					FEED %	CAKE %
JANUARY	6,273,300	4,245,600	2,027,700	161.99	0.99	16.7
FEBRUARY	6,589,095	4,650,450	1,938,645	167.15	0.98	15.9
MARCH	6,711,273	4,525,975	2,185,298	165.87	0.99	15.7
APRIL	4,842,403	3,315,975	1,526,428	127.83	1.01	15.0
MAY	5,117,189	3,484,975	1,632,214	125.08	0.93	14.8
JUNE	6,699,148	4,691,200	2,007,948	176.16	1.02	15.2
JULY	6,097,563	3,876,875	2,220,688	139.30	0.97	15.4
AUGUST	4,996,923	3,053,775	1,943,148	122.24	1.07	15.6
SEPTEMBER	5,741,851	3,515,500	2,226,351	138.26	1.03	15.5
OCTOBER	4,934,286	3,322,600	1,611,686	136.02	1.02	15.1
NOVEMBER	6,505,648	4,530,350	1,975,148	164.47	0.92	15.4
DECEMBER	5,142,645	3,173,350	1,969,295	111.41	0.88	15.2
TOTAL	69,651,324	46,386,775	23,264,549	1,735.78		
AVERAGE	5,804,277	3,865,565	1,938,712	144.65	0.98	15.5

2012 SEWER MAINTENANCE UNIT ANNUAL REPORT

Sewer Maintenance, a unit of the Water Pollution Control Center, investigated 76 complaints of sewer problems in the year 2012. 8% of these complaints were due to a problem within the City's sewer system. The remaining 92% of complaints were in the homeowner's sewer. Of those complaints 20% of the 76 calls were received during nonscheduled work hours and required employees to be called in to work.

The Sewer Maintenance Unit, which consists of twelve employees, maintains a sanitary sewer system that reaches far outside the City of Findlay Corporation limits. The sanitary sewer system has 16,926 customers and is estimated to consist of over 295 miles of sewers and several thousand manholes. The preventive maintenance program conducted by the Sewer Maintenance Unit allows for the cleaning of all City sanitary sewers every eight years and additional cleaning of known areas with historic sewer problems.

During 2012, a total of 57 miles of sanitary sewer were cleaned by the sanitary vector, (a high-pressure water sewer cleaner and vacuum truck). The sanitary and storm vectors also cleaned various building drains for other City departments, including tanks and basins at the Water Pollution Control facility, Water Treatment Plant, the City swimming pool, and lift stations wet wells.

In 2012, a private contractor treated 4,109 feet of sanitary sewer for root intrusion. This process involves the spraying of foam on the roots within the sewer system, killing the roots without harming the tree. This process reduces sewer blockages within the lines and cuts down on the frequency that cleaning is required.

The Sewer Maintenance Unit also maintains the storm sewer system, within the City of Findlay Corporation limits. It consists of an unknown number of miles of sewer as well

as manholes and approximately six thousand four hundred (6,400) catch basins. The City's storm water maintenance crew cleaned 2865 catch basins along with 4,780 feet of storm sewer. A total of 14 catch basins were rebuilt and 693 were repaired in 2012.

The Sewer Maintenance Unit utilizes a self-propelled main line camera; a manhole camera, a lateral inspection camera and a jetter assisted camera in the inspection of sewers and their structures. The self-propelled main line camera was updated in 2009 to provide it with pan & tilt capabilities which allow it to look up sewer laterals from the main line sewer. In 2012, 3,168 feet of sewer were inspected by the main line camera. The Maintenance Unit also utilizes a lateral camera that allows for the inspection of lines as small as two (2) inches. It has also been used to aid the Traffic Unit in locating breaks in their two (2) inch electrical conduits. A manhole inspection camera and video recorder allows City employees to safely inspect and record manhole conditions without entering the manhole.

As required by OSHA and the City of Findlay's confined space entry policy, all confined space entries must be documented. During 2012, 11 entries were required by maintenance personnel to the sewer system. The Sewer Maintenance Unit used an enclosed trailer to allow all confined space equipment to be readily available at the job site. This reduces entry time and provides a safer entry procedure with all the equipment closely at hand.

The Sewer Maintenance Unit, along with the Water Distribution Department, is required to locate and mark sewers and related structures as part of the Ohio Utilities Protection Service. During 2012 the Sewer Maintenance Unit alone had requests for 6,344 sewer locates which was up from 5,299 requests in 2011 but still well below the high in 2005 of 7,839.

During 2012, the Sewer Maintenance Unit repaired 2 sanitary sewer pipe and 4 storm sewer pipes, which had either collapsed or were damaged by utilities.

The Sewer Maintenance Unit maintains 15.1 miles of sanitary force mains from various pump stations located both within the City of Findlay corporation limits and the outlying area. Located on these force main are 35 air relief valves that need to be maintained or replaced (as needed) on a weekly bases .To ensure efficient pumping and proper flows from the Lift Stations.

The Sewer Maintenance Unit continued installing flap gates on all Combined Sewer Overflows to prevent river water intrusion during flooding condition from backing into the sewer system thus surcharging the sewer system. Additional flap gates are installed on storm sewers to help minimize street flooding during high water levels of the Blanchard River and its tributaries. In October of this year, the Sewer Maintenance Unit constructed a three foot by nine foot by five foot (3'x9'x5') structure that utilizes three new 18" flap gates at the Hunter's Creek Subdivision. This is an attempt to prevent street flooding cause by high elevation of Lye Creek from backing up into the south holding pond through the triple 18" storm sewers during flood events. A 15" storm sewer was also rerouted from the pond and was tied in downstream (south) of the flap gate structure.

The Sewer Maintenance Unit repairs manholes, constructs new manholes, constructs drainage for localized storm water problems, conducts dye tests, conducts flow monitoring with two (2) portable flow monitors, and maintains a rat control maintenance program in the City sewer system. In addition, the Sewer Maintenance Unit conducts smoke testing on the sewer system to inspect for sources of inflow and infiltration to the sanitary sewer system.

The Sewer Maintenance Unit also assists the Water Pollution Control employees with street closing and barricading during high water events.

In 2008, the Sewer Maintenance Unit began plugging the abandon sanitary sewer laterals of properties damaged in the 2007 flood which were demolished by the Findlay

Public Works Department. In 2012, several properties were demolished and a total 8 laterals were abandoned.

During 2012, approximately 30% of the Sewer Maintenance Unit man-hours were spent maintaining sanitary sewers, 45% on storm sewers, and the remaining 25% on building and equipment maintenance, vacation, sick leave, confined space entry training and equipment use and various other safety training.

2012

SEWER MAINTENANCE

ANNUAL REPORT OF OPERATIONS

MONTH	CLEANING						CATCH BASIN REPAIR / PATCHED	MANHOLE S ADJUSTED	SEWER CALLS	TELEVISED	
	BUCKET		VACTOR			JET				SANITARY	STORM
	SANITARY	STORM	SANITARY	STORM	BASINS	FLUSHING					
	FEET	FEET	FEET	FEET	#	FEET				#	FEET
JANUARY	0	0	10,010	1,226	95	0	0/26	0	11	610	0
FEBRUARY	0	0	20,568	390	256	0	0/32	4	2	406	232
MARCH	0	0	28,293	1,471	239	0	2/32	8	8	585	450
APRIL	0	0	31,962	285	395	0	4/52	3	7	0	0
MAY	0	0	22,133	14	266	0	1/62	0	3	0	0
JUNE	0	0	9,744	0	101	0	1/77	0	8	275	395
JULY	0	0	26,504	0	290	0	0/89	0	6	0	0
AUGUST	0	0	42,288	275	481	0	4/75	6	8	0	215
SEPTEMBER	0	0	21,273	393	202	0	1/100	6	8	0	0
OCTOBER	0	0	30,095	0	81	0	0/34	0	4	0	0
NOVEMBER	0	0	36,788	286	346	0	1/51	3	7	0	0
DECEMBER	0	0	21,564	440	113	0	0/63	0	4	0	0
TOTAL	0	0	301,222	4,780	2,865	0	14/693	30	76	1,876	1,292
2011 TOTAL	9,781	0	184,904	4,445	1,520	0	78/158	16	115	2,842	0