CITY OF FINDLAY

WATER POLLUTION

CONTROL CENTER

2009
ANNUAL REPORT

January 25, 2010

Mr. Bruce W. Hardy
Service Director
City of Findlay, Ohio

Dear Bruce,

The annual report of operations of the Water Pollution Control Center for the year ending December 31, 2009 is respectfully submitted here in. The year 2009 was a demanding year with budget trimming, mandated furlough days and employee layoffs. The WPC was affected by the budget trimming and the furlough days which resulted in 1920 hours of lost work time but the WPC was spared with no employee layoffs. I wish to acknowledge the cooperation within the department and the initiative exhibited by the 17 Water Pollution Control and 13 Sewer Maintenance employees in their outstanding operation and maintenance of the wastewater system throughout the year 2009.

Sincerely,

Randy L. Greeno
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	Terry Boren
Seth Cole	Terry Cole
Bob Courtney	Dana Cramer
Brad Ehrnschwender	George Elston
Dave Frantz	Joshua Gearing
Dan Gonzalez	Terry Grohoske
Gary Hayden	Dave Holman
Chris Kolhoff	Marge Mize
Tom Moses	Doug Reed
Randy Reeg	Werner Roesch
Mark Routzon	Jason Sims
Mark Stears	Mike Stillberger
Brent Vaughan	Todd Ward
Jason Wolfarth	Steve Watkins

2009
WATER POLLUTION CONTROL CENTER
ANNUAL REPORT

The Water Pollution Control Center 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 2009 the City of Findlay WPCC completed its seventy-seventh year of operation. I am pleased to announce that there was only one violation of the city's NPDES permit during the year.

The Water Pollution Control Center treated 3.66 billion gallons of sewage in 2009 which was down from 2008's total of 4.68 billion gallons. The daily total for sewage treated was 10.074 million gallons per day in 2009 down from 2008's daily average of 12.812 million gallons per day.

A major improvement project was completed in early summer of 2009 at the WPC with the addition of an emergency generator which will supply power to the entire WPC when electrical power is unavailable. This project consisted of a 1500 KW diesel powered generator, automatic transfer switch, a 2000 KVA pad mounted three phase transformer and a 2000 gallon fuel tank. With this new equipment the chances of prolonged outages and facility shut downs should be negated thus protecting the environment from untreated sewage entering into the Blanchard River.

The City of Findlay continued to work on the Long Term Control Plan for Combined Sewer Overflows and reducing the frequency of these overflows. The major improvement that was completed this year was the combined sewer separation project on East Lincoln Street which provided that area with new storm and sanitary sewers. The sewer lining program continues to move forward, with the lining of 1,835 feet of sewer in 2009 and 5,770 feet that has been

contracted out with 2009 monies to be completed in early 2010. Chemical root treatment was conducted on 3,173 feet of sewer during 2009. The Public Works department removed 948.43 tons of debris from the streets in 2009, 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 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 thus leading to the planning of two more collections in 2010.

In 2009 the City of Findlay hired an engineer to handle the OEPA mandated 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. Two of the most noticeable activities for 2009 were the distribution of storm water pollution fliers in the water and sewer bills and the formation of the SWAC (Storm Water Advisory Committee) which will assist the City in policy changes needed for the implementation of the Storm Water Management Plan.

The City of Findlay installed their first Storm Water Swirl Concentrator System on the East Melrose Street project. This unit collects storm water pollutants and separates it from the storm water flow before it discharges into the storm sewer and then into Howard Run. The Sewer maintenance unit will be in charge of doing routine maintenance and cleaning of this unit.

The WPCC staff continues to present storm water programs and tours for school age kids. These programs focused 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 2009. The clean-ups were highly successful with the volunteers removing 150 car and trucks tires along with miscellaneous items which weighed in at 1.64 tons. These clean-ups were conducted in a stretch of the river just west of the Broad Avenue Bridge.

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
Terry Cole	Class 3	David Frantz	Class 3
Mark Stears	Class 3	Raul Amesquita	Class 3
Jason Wolfarth	Class 3	Seth Cole	Class 3
Josh Gearing	Class 1	Werner Roesch	Class 1
Jason Sims	Class 1		

Waste Water Collection Licenses:

Robert Courtney	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. 1789.74 dry tons of biosolids were treated and disposed of at the Hancock County Landfill in 2009. This averaged 11.7 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 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. The Blanchard River exceeded flood stage two times during the year with the highest elevation, measured by the National Weather Service being 4.4 feet above flood stage measuring out at 15.4 feet. This flood rated as the ninth worst flood in Findlay's recorded history of flooding.

On January 16th, the City of Findlay recorded 15 degrees below zero as the lowest temperature of the year. The highest temperature of the year was recorded on June 25th when the mercury reached 95 degrees. The year 2009 recorded a total of six days at 90° or above compared to nine days in 2008 and twenty days in 2007. The year 2009 recorded a total of seven days at 0° or below with five days occurring in January and two days occurring in February. This compares to two days below zero in 2008. During the year of 2009, no high temperature records were broken or tied and one low temperature record was tied on July 13th at 51°.

These records can be found on the Temperature and Precipitation Data sheet included in this annual report. The historical record low temperature of -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 2009 was 32.64 inches, which was 3.27 inches below the one-hundred fifteen year average of 35.91 inches. The month of April accounted for the greatest amount of monthly precipitation at 4.64 inches and the month of September the least at 0.60 inches.

The September total of 0.60 inches was the fourth driest September recorded since 1894. November was also extremely dry with a monthly precipitation of 0.71 inches which was the third driest November since 1894. March 8th recorded the largest single day rainfall at 2.70 inches. The following are all days in 2009 that one inch or more of rainfall in a 24 hours period:

March 8th	2.70”
June 19th	2.44”
February 11th	1.83”
October 2nd	1.31”
May 7th	1.15”
May 14th	1.04”

The WPC recorded 189 days with precipitation which accounts for 51.8% of the days in 2009 out of those 189 days 123 days 33.7% had measurable amounts of precipitation of more than 0.01”.

The year 2009 recorded a total snowfall of 23.4 inches of snowfall, which is 3.1 inches below the average. The month of January was the snowiest month with 15.1 inches recorded.

2009

TEMPERATURE AND PRECIPITATION

MONTH	TEMPERATURE				PRECIPITATION			
	AVERAGE MAXIMUM°		AVERAGE MINIMUM °		TOTAL "		SNOWFALL "	
	2008	2009	2008	2009	2008	2009	2008	2009
JANUARY	36.4	26.0	21.4	9.9	2.01	1.51	3.4	15.1
FEBRUARY	33.6	38.1	19.1	21.9	5.66	2.69	15.7	2.3
MARCH	42.9	52.6	28.0	30.5	5.38	4.58	9.5	T
APRIL	62.7	60.0	41.6	40.3	3.88	4.64		T
MAY	68.0	71.9	48.4	49.3	5.29	3.52		
JUNE	81.0	79.6	62.6	59.4	5.63	4.46		
JULY	83.8	79.4	63.9	59.1	2.69	1.98		
AUGUST	82.1	82.2	61.4	62.0	1.79	1.91		
SEPTEMBER	79.0	76.4	56.2	54.4	4.91	0.60		
OCTOBER	62.8	58.8	41.5	40.5	1.91	3.97	T	
NOVEMBER	47.2	54.2	31.4	36.8	2.24	0.71	0.2	T
DECEMBER	37.1	35.9	21.0	22.8	3.69	2.07	3.0	6.0
TOTAL					45.08	32.64	31.8	23.4
AVERAGE	59.7	59.6	41.4	40.6				
HISTORIC AVERAGE					35.85	35.91	25.8	26.5

NEW TEMPERATURE RECORDS:

July 13 (Tied)	51°	Record	1940/	1976	51°

2009

ANNUAL SUMMARY OF OPERATIONS

REMOVAL OF SUSPENDED SOLIDS	
2009 RAW TO FINAL	2008 RAW TO FINAL
97.8%	97.4%

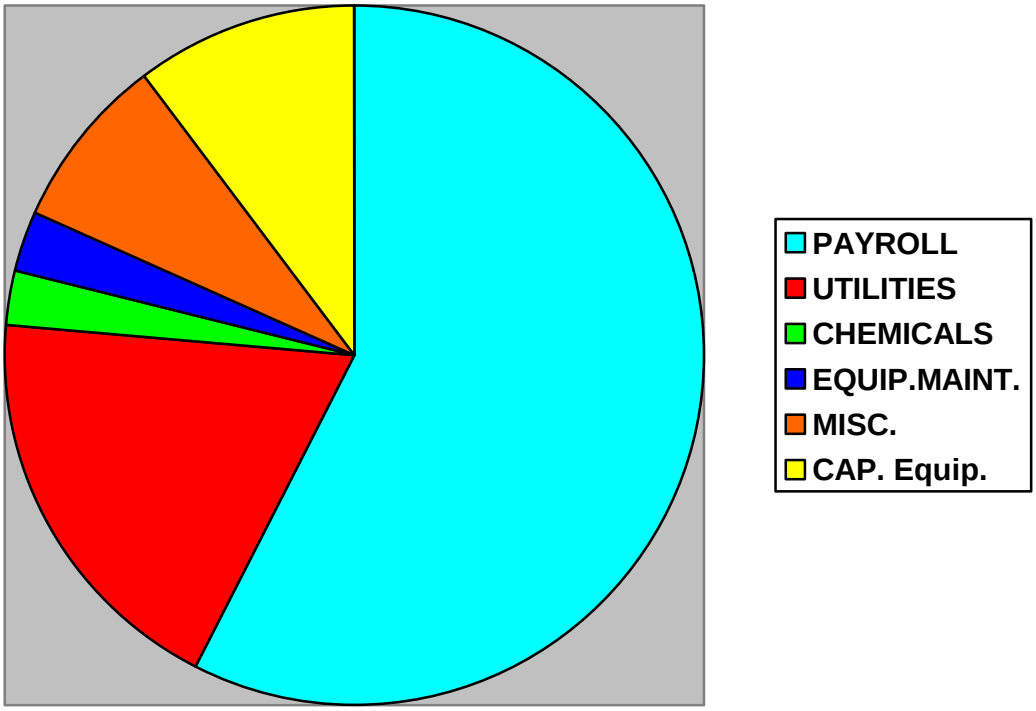
REMOVAL OF 5-DAY C.B.O.D. (Carbonaceous Biochemical Oxygen Demand)	
2009 RAW TO FINAL	2008 RAW TO FINAL
98.5%	98.3%

REMOVAL OF AMMONIA	
2009 RAW TO FINAL	2008 RAW TO FINAL
99.4%	99.3%

REMOVAL OF TOTAL PHOSPHORUS	
2009 RAW TO FINAL	2008 RAW TO FINAL
93.7%	87.5%

COST OF OPERATION				
	2009		2008	
PAYROLL & BENEFITS	$	1,248,987	$	1,263,177
UTILITIES (electric, water & sewage)	$	414,724	$	413,209
CHEMICALS	$	51,777	$	57,406
EQUIPMENT MAINTENANCE	$	59,939	$	107,825
MISCELLANEOUS	$	182,028	$	260,391
CAPITAL EQUIPMENT	$	222,610	$	250,378
TOTAL	$	2,180,065	$	2,352,386
COST PER MILLION GALLONS	$	596	$	502

2009 WPC COST OF OPERATION



PAYROLL AND BENEFITS	$1,248,987
UTILITIES	$ 414,724
CHEMICALS	$ 51,777
EQUIPMENT MAINTENANCE	$ 59,999
MISCELLANEOUS	$ 182,028
CAPITAL EQUIPMENT	$ 222,610

2009

ANNUAL SUMMARY OF OPERATIONS

MONTH	FLOW (Million Gallons)		
	TOTAL	AVG/DAY	PEAK
JANUARY	269.530	8.695	11.419
FEBRUARY	461.265	**16.474**	**33.232**
MARCH	**509.561**	16.437	33.160
APRIL	448.292	14.943	29.124
MAY	384.560	12.405	25.426
JUNE	281.467	9.382	19.628
JULY	226.010	7.291	10.630
AUGUST	214.279	6.912	8.634
SEPTEMBER	191.672	6.389	7.577
OCTOBER	241.423	7.788	16.505
NOVEMBER	191.126	6.371	7.536
DECEMBER	241.707	7.797	11.539
2009 TOTAL	3,660.892		
2009 AVERAGE	305.074	10.074	17.868
2008 TOTAL	4,684.521		
2008 AVERAGE	390.377	12.812	24.559

2009

ANNUAL SUMMARY OF OPERATIONS

MONTH	SUSPENDED SOLIDS MG/L		5-DAY CBOD MG/L		AMMONIA MG/L	
	RAW	FINAL	RAW	FINAL	RAW	FINAL
JANUARY	158	2	126	2	16.1	<0.10
FEBRUARY	105	3	92	2	11.6	<0.10
MARCH	96	3	85	2	10.2	<0.10
APRIL	90	2	89	2	10.5	<0.10
MAY	119	2	112	2	12.7	<0.10
JUNE	146	3	140	2	15.6	<0.10
JULY	129	3	141	2	18.3	<0.10
AUGUST	161	3	144	3	18.7	<0.10
SEPTEMBER	180	5	179	3	21.6	.16
OCTOBER	147	3	146	2	19.7	.18
NOVEMBER	157	3	156	2	20.8	<0.10
DECEMBER	165	4	165	3	17.6	0.01
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
2009 AVERAGE	138	3	131	2	16.1	<0.1
2008 AVERAGE	116	3	121	2	14.3	<0.1

2009
ANNUAL SUMMARY OF OPERATIONS

MONTH	TOTAL PHOSPHORUS MG/L		COD MG/L	FECAL COLIFORM #/100ML
	RAW	FINAL	FINAL	FINAL
JANUARY	3.9	.17	13	
FEBRUARY	2.7	.19	11	
MARCH	2.5	.17	7	
APRIL	2.5	.18	7	
MAY	3.1	.21	15	102
JUNE	4.2	.34	20	150
JULY	3.9	.41	15	254
AUGUST	4.2	.26	17	239
SEPTEMBER	5.1	.25	23	51
OCTOBER	4.5	.27	17	125
NOVEMBER	4.7	.21	18	
DECEMBER	4.7	.16	19	
NPDES LIMIT	N/A	1.00	N/A	1000/100ML
2009 AVERAGE	3.8	0.24	15	154
2008 AVERAGE	3.2	0.40	18	60
2007 AVERAGE	3.6	0.72	15	23

2009
ANNUAL SUMMARY OF OPERATIONS

MONTH	DISSOLVED OXYGEN (PPM)		
	FINAL EFFLUENT	BLANCHARD RIVER ABOVE	BLANCHARD RIVER BELOW
JANUARY	9.4	13.2	13.2
FEBRUARY	9.0	13.2	12.6
MARCH	9.0	12.2	12.8
APRIL	9.1	11.3	.11.2
MAY	8.4	9.0	9.1
JUNE	8.0	7.7	7.3
JULY	8.2	10.6	9.1
AUGUST	8.0	8.3	5.9
SEPTEMBER	8.0	11.1	6.6
OCTOBER	8.4	8.1	7.8
NOVEMBER	8.2	7.9	8.1
DECEMBER	9.2	12.5	11.2
NPDES PERMIT (SUMMER) 5/01-10/31	6.7		
NPDES PERMIT (WINTER) 11/01-4/30	5.3		
2009 AVERAGE	8.6	10.4	9.6
2008 AVERAGE	8.5	10.5	9.2
2007 AVERAGE	8.4	9.6	8.9

2009

SOLIDS PROCESSING ANNUAL REPORT

MONTH	OPERATING HOURS 1	2	3	4	TOTAL OPERATING HOURS	AVERAGE COST $/TON	POLYMER COST TOTAL,$	POLYMER USAGE GALLONS	*AVG.SOLIDS* CAPTURE %
JANUARY	126.25	122.50	0	117.75	366.50	18.58	2,719.75	247.25	98
FEBRUARY	125.25	119.75	0	117.50	362.50	18.09	2,655.73	241.43	98
MARCH	149.25	9.75	138.25	145.00	442.25	16.62	4,111.58	373.78	99
APRIL	129.25	0	123.00	118.75	371.00	17.78	2,816.00	256.00	99
MAY	122.50	0	116.00	112.50	351.00	16.65	2,651.00	241.00	99
JUNE	90.25	0	118.50	120.25	329.00	16.97	2,446.62	222.42	98
JULY	103.25	79.00	100.00	20.50	302.75	17.15	2,209.13	200.83	99
AUGUST	114.25	116.25	106.75	5.50	342.75	18.11	2,590.05	223.28	99
SEPTEMBER	108.75	105.00	0	94.25	308.00	19.47	2,338.44	201.59	99
OCTOBER	98.25	95.00	0	84.75	278.00	17.88	2,112.59	182.12	99
NOVEMBER	119.75	116.00	109.00	0	344.75	19.94	2,574.27	221.92	99
DECEMBER	135.75	131.75	125.25	0	392.75	20.00	2,990.71	257.82	99
TOTAL	1422.75	895.00	936.75	936.75	4191.25		32,215.87	2,869.44	
AVERAGE					367.83	16.90	2,684.66	239.12	99

Polymer $11.60/gallon

2009

SOLIDS PROCESSING ANNUAL REPORT

MONTH	TOTAL SLUDGE DEWATER & SUPNT. GALLONS	DEWATERED SLUDGE GALLONS	SUPERNANT GALLONS	DEWATERED SLUDGE DRY TONS	AVG. SOLIDS FEED %	AVG. SOLIDS CAKE %
JANUARY	6,337,091	4,534,225	1,802,866	147.67	0.85	15.6
FEBRUARY	6,390,947	4,602,560	1,788,387	149.31	0.85	15.9
MARCH	7,016,316	5,098,085	1,918,231	191.45	0.97	16.5
APRIL	5,855,292	3,985,310	1,869,982	157.67	0.98	15.7
MAY	6,471,719	4,037,555	2,434,164	160.06	1.05	16.0
JUNE	6,538,362	3,736,205	2,802,157	190.34	1.07	16.4
JULY	6,116,365	3,410,720	2,705,645	128.26	1.02	16.3
AUGUST	6,915,753	4,095,420	2,820,333	141.49	0.96	15.3
SEPTEMBER	6,040,625	3,841,535	2,199,090	120.92	0.84	14.6
OCTOBER	5,686,979	3,169,432	2,517,547	118.45	1.01	14.4
NOVEMBER	6,774,656	4,329,954	2,444,702	133.53	0.85	14.7
DECEMBER	7,424,208	4,802,115	2,622,093	150.59	0.86	14.3
TOTAL	77,568,313	49,643,116	27,931,197	1,789.74		
AVERAGE	6,464,026	4,136,926	2,327,600	149.15	0.94	15.5