CITY OF FINDLAY

WATER POLLUTION CONTROL CENTER

2008 ANNUAL REPORT

January 15, 2009

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, 2008 is respectfully submitted here in. I wish to acknowledge the cooperation within the department and the initiative exhibited by the seventeen (17) Water Pollution Control and fourteen (14) Sewer Maintenance employees in their outstanding operation and maintenance of the wastewater system throughout the year 2008.

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
Randy Dick	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	

2008
WATER POLLUTION CONTROL CENTER
ANNUAL REPORT

The Water Pollution Control Center is comprised of two (2) 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 2008 the City of Findlay WPCC completed its seventy-sixth year of operation. I am pleased to announce that there was only two violations of the city's NPDES permit during the year.

Weather played a big part in the operation of the WPC this Year with the heavy flooding in February and a very wet spring. The Water Pollution Control Center treated 4.68 billion gallons of sewage in 2008 that total being the most sewage ever treated in a one year period. The daily total for sewage treated has also climbed to 12.812 million gallons per day in 2008. To put that to a reference that would be like filling the new, large portion of the City of Findlay's reservoir system. On the other hand the City of Findlay Water Treatment facility treated about 2.35 billion gallons of potable water in 2008. As you can see by these numbers it is to the utmost importance to continue to attack all forms of water infiltration and intrusion into the collection system. With these improvements to the collection system this will lower the gap between clean water and waste water treated.

The City of Findlay continued to work on the Long Term Control Plan for Combined Sewer Overflows and reducing the frequency of these overflows. Improvements that were completed this year were the installation of flap-gates on some of the CSO discharges thus reducing the amount of river water intrusion into the sanitary sewer system. The sewer lining program continues to move forward, with the lining of 7,277 feet of sewer in 2008. Chemical root treatment

was conducted on 4,740 feet of sewer during 2008. The Public Works department removed 1159.30 tons of debris from the streets in 2008, thus preventing this pollution from entering into the storm sewer system and to the receiving streams.

In 2008 the WPCC finished the storm water placard program which was started in 2006. This program consists of installing plastic storm water placards on catch basins that warn against disposing of materials down the storm sewer system which discharges directly into receiving streams. The placards were installed by Eagle Scouts, Girl Scout troops, Church groups, University of Findlay students and individual residents. In 2008, 2,365 placards were installed bringing the total for the program to 5,110. We will continue to install placards that have been damaged or removed as needed on catch basins throughout the city.

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.

Several citizen groups, City of Findlay employees and members of the Blanchard River Watershed Partnership performed several river clean-ups throughout 2008. The clean-ups were highly successful with the volunteers removing 533 car and trucks tires along with miscellaneous items which weighed in at 7.0 tons. These clean-ups were conducted in a 1.2 mile stretch of the river just west of the city limits.

Laboratory testing, to assure compliance with the NPDES permit limits, is performed at the WPCC and several outside laboratories. Two (2) 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 eight (8) operators, licensed by the Ohio Environmental Protection Agency:

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

It should also be noted that Terry Cole, Supervisor of the Sewer Maintenance Department, has a Class 3 Operator's license. As well as Robert Courtney, Mark Routzon and Mike Stillberger maintain Class 1 Wastewater Collection licenses.

Four (4) belt filter presses located in the Solids Processing Building thicken wastewater biosolids (sludge) that are generated at the Water Pollution Control. One thousand nine hundred sixteen (1,916) dry tons of belt filter press biosolids were treated and disposed of at the Hancock County Landfill in 2008. This averaged 11.2 dry tons per day of operation of the belt filter presses. 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 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 pretreatment program has continued the excellent cooperative spirit of 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 the official 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 1890. All temperature, precipitation amounts, wind direction and sky conditions are maintained at the River Road facility. Flood information is supplied to the news media when river levels pose a threat to the community. The Blanchard River exceeded flood stage five (5) times during the year with the highest elevation, measured by the National Weather Service being 5.5 feet above flood stage measuring out at 16.5 feet. This flood rated as the fifth worst flood in Findlay's recorded history of flooding.

On December 21st and 22nd, the City of Findlay recorded two (2) degrees below zero as the lowest temperature of the year. The highest temperature of the year was recorded on September 3rd when the mercury reached ninety four (94) degrees. The year 2008 recorded a total of nine (9) days at ninety (90) degrees or above compared to twenty (20) days in 2007 and ten (10) days in 2006. The year 2008 recorded a total of two (2) days at zero (0) degrees or below with all days occurring in December. This compares to eight (8) days below zero in 2007. During the year of 2008, three (3) high temperature records were broken, four (4) high temperatures were tied and no low temperature records were recorded. These records can be found on the Temperature and Precipitation Data sheet included in this annual report. The historical record low temperature of minus twenty-one (-21) degrees was recorded on January 13, 1912 and February 20, 1929. The highest temperature on record was one hundred nine (109) degrees recorded on July 24, 1934.

Total precipitation for 2008 was 45.08 inches, which was 9.15 inches above the one-hundred fourteen (114) year average of 35.93 inches. The year of 2008 was the eighth wettest year since 1894 with the wettest year being in 1972 with 49.35" of precipitation. The month of February accounted for the greatest amount of monthly precipitation at 5.66 inches and the month of August the least at 1.79 inches. The February total of 5.66 inches was the wettest February

recorded since 1894. September 13th recorded the largest single day rainfall at 2.95 inches. The following are all days in 2008 that one (1) inch or more of rain fell in a 24 hours period:

September 13th	2.95”
February 5th	2.04”
August 1st	1.63”
May 2nd	1.32”
March 27th	1.25”
February 6th	1.22”
March 19th	1.14”
September 12th	1.05”
June 3rd	1.04”

The year 2008 recorded a total snowfall of 31.8 inches of snowfall, which is 5.2 inches above the average. The month of February was the snowiest month with 15.7 inches recorded.

2008

TEMPERATURE AND PRECIPITATION

MONTH	TEMPERATURE				PRECIPITATION			
	MAXIMUM °		MINIMUM °		TOTAL "		SNOWFALL "	
	2007	2008	2007	2008	2007	2008	2007	2008
JANUARY	58	66	6	1	4.78	2.01	0.7	3.4
FEBRUARY	44	59	-4	4	0.60	5.66	5.7	15.7
MARCH	76	63	11	12	3.67	5.38	4.0	9.5
APRIL	79	81	20	28	3.92	3.88	1.5	
MAY	90	84	40	39	1.23	5.29		
JUNE	94	91	50	53	0.64	5.63		
JULY	95	90	52	54	4.05	2.69		
AUGUST	93	92	53	53	11.71	1.79		
SEPTEMBER	90	94	41	47	1.95	4.91		
OCTOBER	90	84	32	25	2.16	1.91		T
NOVEMBER	65	74	21	15	3.41	2.24	0.1	0.2
DECEMBER	54	67	6	-2	4.28	3.69	12.6	3.0
TOTAL					42.40	45.08	20.9	31.8
AVERAGE	77	79	27	27				
HISTORIC AVERAGE					35.85		25.8	

NEW TEMPERATURE RECORDS:

January 7	66°	Old Record	1989	60°
February 5	59°	Old Record	1938	58°
December 27	67°	Old Record	1959	63°

2008

ANNUAL SUMMARY OF OPERATIONS

REMOVAL OF SUSPENDED SOLIDS	
2008 RAW TO FINAL	2007 RAW TO FINAL
97.4%	99.2%

REMOVAL OF 5-DAY C.B.O.D. (Carbonaceous Biochemical Oxygen Demand)	
2008 RAW TO FINAL	2007 RAW TO FINAL
98.3%	98.4%

REMOVAL OF AMMONIA	
2008 RAW TO FINAL	2007 RAW TO FINAL
99.3%	99.2%

REMOVAL OF TOTAL PHOSPHORUS	
2008 RAW TO FINAL	2007 RAW TO FINAL
87.5%	80.0%

COST OF OPERATION				
	2008		2007	
PAYROLL & BENEFITS	$	1,263,177	$	1,173,957
UTILITIES (electric, water & sewage)	$	413,209	$	386,009
CHEMICALS	$	57,406	$	58,152
EQUIPMENT MAINTENANCE	$	107,825	$	91,337
MISCELLANEOUS	$	260,391	$	407,741
CAPITAL EQUIPMENT	$	250,378	$	
TOTAL	$	2,352,386	$	2,117,196
COST PER MILLION GALLONS	$	502	$	478

2008

ANNUAL SUMMARY OF OPERATIONS

MONTH	FLOW (Million Gallons)		
	TOTAL	AVG/DAY	PEAK
JANUARY	435.959	14.063	32.907
FEBRUARY	518.338	17.874	**36.145**
MARCH	**721.559**	**23.276**	33.140
APRIL	479.615	15.987	28.223
MAY	480.913	15.513	28.091
JUNE	396.529	13.218	22.927
JULY	305.967	9.870	23.433
AUGUST	221.232	7.137	10.377
SEPTEMBER	243.444	8.115	19.536
OCTOBER	232.302	7.494	12.332
NOVEMBER	248.923	8.297	22.022
DECEMBER	399.740	12.895	25.569
2008 TOTAL	4,684.521		
2008 AVERAGE	390.377	12.812	24.559
2007 TOTAL	4,433.662		
2007 AVERAGE	369.472	12.104	23.364

2008
ANNUAL SUMMARY OF OPERATIONS

MONTH	SUSPENDED SOLIDS MG/L		5-DAY CBOD MG/L		AMMONIA MG/L	
	RAW	FINAL	RAW	FINAL	RAW	FINAL
JANUARY	96	1	117	2	11.8	<.10
FEBRUARY	102	3	93	2	9.6	.13
MARCH	84	2	87	2	8.3	<.10
APRIL	107	2	110	2	11.4	<.10
MAY	99	2	102	2	11.6	<.10
JUNE	107	3	105	2	13.5	<.10
JULY	124	3	125	2	14.2	<.10
AUGUST	152	3	157	3	20.0	<.10
SEPTEMBER	132	4	152	2	19.9	<.10
OCTOBER	141	3	147	2	18.8	<.10
NOVEMBER	133	4	137	2	19.4	<.10
DECEMBER	115	4	118	2	13.2	<.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
2008 AVERAGE	116	3	121	2	14.3	<0.1
2007 AVERAGE	128	1	129	2	13.0	<0.1

2008
ANNUAL SUMMARY OF OPERATIONS

MONTH	TOTAL PHOSPHORUS MG/L		COD MG/L	FECAL COLIFORM #/100ML
	RAW	FINAL	FINAL	FINAL
JANUARY	2.8	0.60	24	
FEBRUARY	2.5	0.46	20	
MARCH	2.1	0.37	15	
APRIL	2.8	0.45	15	
MAY	2.6	0.48	15	3
JUNE	2.6	0.62	16	57
JULY	3.5	0.55	18	71
AUGUST	4.4	0.39	19	116
SEPTEMBER	4.0	0.26	18	60
OCTOBER	4.2	0.22	16	50
NOVEMBER	4.0	0.19	20	
DECEMBER	3.0	0.15	16	
NPDES LIMIT	N/A	1.00	N/A	1000/100ML
2008 AVERAGE	3.2	0.40	18	60
2007 AVERAGE	3.6	0.72	15	23
2006 AVERAGE	3.3	0.73	20	4

2008
ANNUAL SUMMARY OF OPERATIONS

MONTH	DISSOLVED OXYGEN (PPM)		
	FINAL EFFLUENT	BLANCHARD RIVER ABOVE	BLANCHARD RIVER BELOW
JANUARY	9.5	11.6	11.8
FEBRUARY	9.4	13.8	12.8
MARCH	9.3	12.9	12.6
APRIL	9.0	13.0	13.0
MAY	8.4	9.1	9.0
JUNE	8.1	7.2	7.0
JULY	7.9	8.0	7.6
AUGUST	7.7	3.9	3.5
SEPTEMBER	7.8	7.3	5.1
OCTOBER	8.1	11.4	7.6
NOVEMBER	8.0	14.6	8.8
DECEMBER	8.7	12.8	11.2
NPDES PERMIT (SUMMER) 5/01-10/31	6.7		
NPDES PERMIT (WINTER) 11/01-4/30	5.3		
2008 AVERAGE	8.5	10.5	9.2
2007 AVERAGE	8.4	9.6	8.9
2006 AVERAGE	7.9	10.4	10.1

2008

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	147.00	158.75	175.25	7.50	470.50	16.20	3,292.74	299.34	99
FEBRUARY	101.75	101.75	0	100.00	303.50	15.13	2,169.64	197.24	99
MARCH	125.50	111.75	0	121.25	358.50	14.33	2,514.05	228.55	99
APRIL	172.25	172.50	0	161.50	506.25	15.03	3,517.91	319.81	99
MAY	148.00	149.00	25.25	107.50	429.75	16.85	3,121.14	283.74	99
JUNE	118.25	118.25	116.75	0	353.25	16.55	2,565.31	233.21	99
JULY	99.00	132.00	13.25	86.75	331.00	17.20	2,437.27	221.57	99
AUGUST	0	168.25	0	161.50	329.75	18.12	2,357.08	214.28	99
SEPTEMBER	7.25	174.25	0	168.25	349.75	18.45	2,505.14	227.74	99
OCTOBER	111.50	126.00	29.00	91.50	358.00	18.87	2,586.43	235.13	99
NOVEMBER	110.50	85.75	100.00	0	296.25	19.03	2,076.69	188.79	99
DECEMBER	119.75	93.75	23.25	90.75	327.50	17.09	2,349.71	213.61	99
TOTAL	1260.75	1592.00	464.75	1096.50	4414.00		31,493.11	2,863.01	
AVERAGE					367.83	16.90	2,624.43	238.58	99

Polymer $11.00/gallon

2008

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	7,015,743	5,562,313	1,453,430	208.89	1.00	16.2
FEBRUARY	5,485,620	3,740,010	1,745,610	145.19	1.04	17.3
MARCH	5,614,072	4,285,385	1,328,687	175.25	1.05	16.6
APRIL	7,970,104	6,048,225	1,921,879	236.37	1.02	16.7
MAY	6,771,002	5,244,460	1,526,542	192.83	.94	16.8
JUNE	6,180,680	4,040,640	2,140,040	155.78	1.02	17.2
JULY	5,952,041	4,084,660	1,867,381	148.58	.98	17.2
AUGUST	6,477,268	4,315,280	2,161,988	130.49	.81	15.9
SEPTEMBER	6,436,545	4,446,470	1,990,075	140.91	.84	15.9
OCTOBER	6,922,875	4,435,955	2,486,920	138.49	.86	15.6
NOVEMBER	5,764,573	3,464,390	2,300,183	103.22	.83	15.0
DECEMBER	6,001,409	3,847,295	2,154,114	139.49	.95	15.3
TOTAL	76,591,932	53,515,083	23,076,849	1,915.49		
AVERAGE	6,382,661	4,459,590	1,923,071	159.62	.95	16.3