

2007

WATER DISTRIBUTION ANNUAL REPORT



CITY OF FINDLAY WATER DISTRIBUTION DEPARTMENT

136 N. BLANCHARD ST.

FINDLAY, OHIO 45840

The City of Findlay Water Distribution Department consists of 15 full time employees.

- 1 Maintenance Supervisor
- 1 Secretary
- 1 Waterline Maintenance Worker IV
- 3 Waterline Maintenance Worker III
- 6 Waterline Maintenance Worker II
- 1 Water Meter Repairman
- 1 Waterline Maintenance Technician
- 1 Waterline Maintenance Technician Asst.

Collectively, the Water Distribution Department totals 255 years of service.

Members of the Water Distribution staff

Steve Hill-Maintenance Supervisor

Betty Jones-Secretary

Mike Courtney-Waterline Maintenance Worker IV

Dan Perry-Waterline Maintenance Worker III

John Blide-Waterline Maintenance Worker III

Marty Hough-Waterline Maintenance Worker II

Tim Frysinger- Waterline Maintenance Technician

Jeff Kolhoff-Waterline Maintenance Worker II

Ken Paul-Waterline Maintenance Worker II

Jeff Betts-Waterline Maintenance Worker III

Larry Pocock-Waterline Maintenance Worker II

Robert Wagner-Waterline Maintenance Technician Asst.

Jerry Peterson-Water Meter Repairman

Bryan Miller-Waterline Maintenance Worker II

Mike Rader- Waterline Maintenance Worker II

DEPARTMENT RESPONSIBILITIES

At the end of 2007 the City of Findlay's Water Distribution Department was responsible for 302.19 miles of city water main. There are 18,801 water service connections, meter settings, and 2,333 fire hydrants.

From a newspaper article dated August 1968 there were 154 miles of city water main, adding an average of 3.79 miles per year over the 39-year period. There were 5,250 water service connections, for an average of 347.46 new service connections per year over the 39-year period, and 849 fire hydrants for an average of 38.05 new hydrants per year installed over the 39-year period.

The department also documents all activities handled including major activities such as: installation of water lines, water taps, service line renewals, main break repairs, hydrant repairs, locating of water lines for other utilities and contractors, repairs to streets, driveways, and sidewalks damaged by our activities, inspections of water service line installations, collection of bacteria samples for new water line installations and leak detection, review of all proposed construction plans, to make sure the proposed water lines are in compliance with Ohio EPA rules and regulations and AWWA Standards, and maintenance and minor repairs to the department's vehicles and equipment.

The Department also assists other departments upon request and performs many other activities too numerous to list.

LEAK DETECTION PROGRAM



The yearly leak detection survey of the water distribution system was unable to be completed this year due to a corrosion project that we undertook in the spring of 2007. This equipment was used to check other leaks that were reported to us and it worked very well for us again.



Since the implementation of the program in January of 1990, this department has found a total of 513 underground leaks, for an average of 32.0 leaks found per year. Estimated gallons per day saved throughout the operation of this program would be 4,880,799 gallons per day

The leak detection equipment is Fluid Conservation Systems 2001 Tri-Correlator. Five employees took the weeklong training course and were taught how to recognize leak sounds and how to use the computer to correlate the leaks. These employees were Tim Frysinger, Larry Pocock, Bob Wagner, Ken Paul and Jeff Betts.

Average daily pumpage since 1989

1989	6.94 million gallons per day
1990	6.35 million gallons per day
1991	6.75 million gallons per day
1992	6.50 million gallons per day
1993	6.91 million gallons per day
1994	6.89 million gallons per day
1995	6.96 million gallons per day
1996	6.95 million gallons per day
1997	6.71 million gallons per day
1998	6.60 million gallons per day
1999	6.73 million gallons per day
2000	6.38 million gallons per day
2001	6.41 million gallons per day
2002	6.53 million gallons per day
2003	5.96 million gallons per day
2004	6.48 million gallons per day
2005	6.38 million gallons per day
2006	6.62 million gallons per day
2007	6.59 million gallons per day

NEW WATER SERVICE CONNECTIONS



From 1990 through 2007, over a sixteen (16) year period, we have added 4,554 new water service connections to our system. This is an average of 284 new water services installed per year. The year 1989 is shown for a comparison to the rate of growth.

1989	140
1990	186
1991	187
1992	162
1993	209
1994	272
1995	245
1996	268
1997	285
1998	346
1999	360
2000	403
2001	293
2002	316
2003	242
2004	275

2005	271
2006	234
2007	145

For the year 2007, 100 – ¾ inch services were installed taking 925 man-hours and 165 backhoe hours, 40 – 1 inch services were installed taking 301 man-hours and 48 backhoe hours, 0 - 1 ½ inch services, 5 - 2 inches services were installed taking 107 man-hours and 13 backhoe hours. There was another 11 additional main line taps, 2 – 4 inch, 3 – 6 inch, 2 – 8 inch, 1 – 10 inch, and 3-12 inch taking 63 man-hours and 10 backhoe hours.

LINE LOCATING

Combined with the leak-locating program is the line locating program. This program is for locating our water lines for other utilities, contractors, developers and consultants.

We are a member of the Ohio Utilities Protection Service. They send us locates via an OUPS printer and we in turn notify other city departments as needed.

Growth in locates from 1989 to 2007:

1989	222
1990	784
1991	1217
1992	2072
1993	2446
1994	2112
1995	3162
1996	3528
1997	4070
1998	4410
1999	3829
2000	6725
2001	5817
2002	5960
2003	5146
2004	6079
2005	6506
2006	6748
2007	5897

This figures out to be 23.4 locates per day for the 251 working days in a year. At the current rate of growth of our system, locating is going to require the addition of an extra person at least part of the year. Along with line locating, there is also the collection of bacteria samples for testing of new water main installations. There were 110 bacteria samples collected this year.

WATER SERVICE RENEWALS



A total of 105 water services were renewed taking 960 man-hours and 176 backhoe hours. There were 96 – ¾ inch services, 9 – 1 inch services renewed. This was in conjunction with the annual repaving and water line replacement projects.

From 1990 through 2007 – 3,288 water services have been renewed for an average of 182.6 services being renewed per year.

METER SHOP REPAIRS AND TESTING

Tested	822
Repaired	779
Junked	762

LARGE METER TESTING

The large meter testing program was not completed this year due to the corrosion control job that was completed on CR 236.

CORROSION CONTROL

2007 was the first year that we have actively pursued a corrosion project. With CR 236 expanding to five (5) lanes, it placed our 20 inch main line out under the pavement. We had been experiencing problems with bolts corroding and failing, so we hired Corr-Pro to do a study for us and make recommendations as to how to slow down this problem. So, we dug out and exposed each and every joint of pipe between SR 12 and US 224, approx. one mile long. We installed jumper wires at each joint as well as attached an anode bag to the main with the intention of the corrosion attacking the sacrificial anode bag rather than the main line. This was by far the largest project that this department has ever taken on before and it was completed ahead of the road contractor. We had men working somewhere on this project for over seven months.

FIRE HYDRANT FLUSHING

The Water Dist. Department has taken over the flushing, tagging, and pumping of hydrants completely as of 2007. We were able to complete this task in two different phases. We started flushing hydrants in the spring and stopped to work on the corrosion project. In the early fall we were able to return to the flushing and continued into the pumping of these hydrants

MISCELLANEOUS JOBS

There were 13 different miscellaneous jobs done by water distribution for a total of 312.5 hours with 27.75 hoe hours, 3 vacor hours,: Picked up barricades, stoned holes, locate shut off for plumber, check holes, met with many contractors and customers over water lines, set up arrow boards for Police

Department for parades, set fishing docks, dig out holes for Street Department to hot patch, plow snow for Street Department, work gate valves for contractors installing new main lines, installed conduit for Traffic Department, and many other miscellaneous jobs too numerous to mention

NEW EQUIPMENT

We purchased:

2008 Ford ¾ ton 4 x 4 extended cab with snow blade at a cost of \$26,892. This truck is used to help plow streets after heavy snows with the Street Department as well as any off road locations that we need to go to for leaks or bacteria samples.

2008 Ford 1 ton crew cab work truck at a cost of \$28,346. This truck is used by the crews to use in their everyday job.

2008 Wachs Valve Operator with vacuum at a cost of \$37,895. This piece of equipment will be used in conjunction with a uni-direction flushing program.

2007 Allied Plate Compactor for use with the backhoe at a cost of \$ 5,000.00.

GOALS FOR 2008

Help with the new Badger Meter Galaxy meter reading system with the first and second year meters being installed by both contractor and ourselves.

Continue to install short runs of mainline to eliminate dead ends on our system as well as upgrade areas with low flow and or low pressure.

Continue to update all waterline maps in house for future reference for GIS and KY Pipe.

Start a valve, locate and exercise program.

Continue with an annual large meter test and repair program.

Continue to renew services in conjunction with the street resurfacing program and the installation of many new services.

Over see an ongoing corrosion control project being done through the Engineering Department.

I would like to thank the employees of the Water Distribution Staff, who work diligently in meeting the deadlines of this department.

Respectfully submitted,

Steven D. Hill
Water Distribution Supervisor

LIST OF DEPARTMENTAL ACTIVITIES PERFORMED

Cold Mix repairs temporary patch to street excavations 58 different sites	Man-hours	94	Backhoe Hrs.	6
53 gate box repairs	Man-hours	89.5	Backhoe Hrs.	5
new gate valves installed	Man-hours		Backhoe Hrs.	
16 gate valves repaired	Man-hours	243	Backhoe Hrs.	30
15 fire hydrants installed or replaced	Man hours	244	Backhoe Hrs.	33
112 fire hydrants repaired	Man-hours	216.75	Backhoe Hrs.	11.75
13 fire hydrants checked for damage	Man hours	14		
2 customers new water service line installation inspections	Man hours	1		
16 meter lids replaced	Man hours	11		
77 broken mains varying in sizes from 1 inch and up. Includes regular hours, overtime hours and call out stand-by hours	Man-hours	899.75	Backhoe Hrs.	132
107 leaks checked out	Man-hours	214.25	Backhoe Hrs.	21
21 meters set in	Man-hours	111.75		
5 meter reductions	Man-hours	7.25		
39 meters taken out	Man-hours	41.25		
5 meters changed	Man-hours	5.75		
19 pressure checks	Man-hours	16.75		
6 turn on service	Man-hours	4		
5106turn off for repairs regular hours, Overtime hours and call out stand-by	Man-hours	88.5		
11 services killed	Man-hours	83.5	Backhoe Hrs.	15.5
24 rusty water complaints Flushed lines	Man-hours	19.75		
9 service lines repairs	Man-hours	115	Backhoe Hrs.	16

7 settings lowered	Man-hours	11	Backhoe Hrs.	0
8 settings moved	Man-hours	80	Backhoe Hrs.	11
4 settings raised	Man-hours	7.5	Backhoe Hrs.	
74 settings repaired	Man-hours	132.5	Backhoe Hrs.	7.5
208 no water calls	Man-hours	162.5	Welder	20.25
158 nipples installed	Man-hours	2		
24 Temporary meter set and removed	Man-hours	26.75		

LIST OF DEPARTMENT EQUIPMENT AND ORIGINAL COST

1-2002 Supervisory Vehicle	\$ 15,631.00
1-1995 Maintenance Pick-up Truck equipped with tapping machine and various small tools	\$ 18,200.00
1-1995 Maintenance Pick-up Truck equipped with tapping machine and various small tools	\$ 17,206.00
1-1994 Maintenance Pick-up Truck equipped with tapping machine and various small tools	\$ 17,206.00
1-2008 Maintenance Crew Cab Service Truck Equipped with tapping machine And various small tools	\$ 28,346.00
1-2008 Extended Cab 4 x 4 w/snow blade	4 26,892.00
1-2003 Maintenance Pick-up Truck 4 wheel drive	\$ 15,363.00
1-1995 Two Ton Dump Truck	\$ 38,450.00
1-2005 Two Ton Dump Truck	\$ 66,868.00
1-2004 Two Ton Dump Truck	\$ 56,213.00
1-1990 One Ton Dump Truck with snow plow	\$ 19,446.89
1-2000 Dodge Van	\$ 14,977.00
1-2001 Tricorr Leak Detector	\$ 44,000.00
1-2005 LB-75 Ford Backhoe Four wheel drive (2004 model traded in for 2005 model at a cost of \$ 4,715.00)	\$ 49,162.00
1-2005 LB-75 Ford Backhoe (2004 model traded in for 2005 model at a cost of \$ 4,715.00)	\$ 49,162.00
1-2004 LB-75 Ford Backhoe (2003 model traded in for 2004 model at a cost of \$ 4,715.00)	\$ 47,204.00

1-2004 LB-75 Ford Backhoe (2003 model traded in for 2004 model at a cost of \$ 4,715.00)	\$ 47,204.00
1-2004 Wachs Vac-Tec vacuum excavator	\$ 34,920.00
1-2008 Wachs Valve Operator	\$ 37,895.00
1-1988 Air compressor	\$ 9,149.00
1-1989 Air compressor	\$ 10,936.00
1-1991 Air compressor	\$ 7,197.00
1-1975 Welder on wheels	\$ 3,200.00
1-1978 Welder on wheels	\$ 4,173.00
1-1985 24 foot trailer	\$ 6,238.00
1-1994 18 foot trailer	\$ 4,257.00
1-2002 19 foot trailer	\$ 4,480.00
1-1992 Compact tractor with snow blower, front loader, rear tiller, and mower	\$ 15,870.00
1-1984 Hole hog 3-1/2 inch	\$ 4,975.00
1-2003 Hole hog 3-1/2 inch	\$ 3,395.00
1-1998 Hole hog 3-1/2 inch	\$ 3,500.00
1-2002 Hole hog 3-1/2 inch	\$ 3,575.00
1-2000 Hole hog 3-1/2 inch	\$ 3,300.00
1-1996 Hole hog 7 inch	\$ 5,432.75
1-1989-2 inch electric pump	\$ 325.00
1-2003-3 inch trash pump	\$ 1,640.88
1-1997-2 inch pump	\$ 525.00
1-2003-2 inch trash pump	\$ 1,187.00
2-2004-2 inch trash pump	\$ 2,374.00
2-1991 Traffic Control Arrow Boards	\$ 8,500.00
2-1997 Solar Traffic Control Arrow Boards	\$ 9,470.00
1-1966 Large Tapping Machine for taps 4" through 12"	\$ 5,600.00
1-1977 Air motor for large tapping machine	\$ 1,200.00
2-1993 B-101 Tapping Machine for 3/4 inch and 1 inch taps	\$ 3,960.00
1-1995 B-101 Tapping Machine for 3/4 inch and 1 inch taps	\$ 2,124.48
1-1997 B-101 Tapping Machine for 3/4 inch and 1 inch taps	\$ 2,386.79
1-1965 D-4 Drilling machine for 1-1/2 and 2 inch taps	\$ 285.00
1-1990 D-5 Drilling machine for 1-1/2 and 2 inch taps	\$ 1,885.30
1-1983 Valve box locator	\$ 554.06
2-1987 Valve box locators	\$ 883.36
1-1987 Valve box locator	\$ 465.00
1-1987 Valve box locator	\$ 674.00
2-1999 Valve box locator	\$ 1,235.00
1-1985 810 Pipe & Cable locator	\$ 1,610.00
1-1990 410 Pipe & Cable locator	\$ 2,300.00
1-1996 410 Pipe & Cable locator	\$ 2,792.79

1-2004 Reed Rotary Cutter 6" & 8"	\$ 1,125.00
1-2004 Reed Rotary Cutter 10" & 12"	\$ 1,400.00
1-1987 Universal pipe cutter	\$ 3,888.00
1-1985 16-D Boring Machine	\$ 6,232.25
1-1987 Plate compactor	\$ 1,350.00
1-2007 Plate Compactor for Backhoe	\$ 5,000.00
1-1991 Power Washer	\$ 3,500.00
3-2003 Power Sweeper	\$ 1,709.70
1-2000-12 inch cut off saw	\$ 823.00
1-1996-14 inch cut off saw	\$ 500.00
1-2000-14 inch cut off saw	\$ 920.00
1-1992 Portable cement mixer	\$ 2,695.00
1-1984 Roto Tiller	\$ 825.00
1-1991 set of trench shoring	\$ 3,240.00
1-1996 set of trench shoring with Sewer Maintenance	\$ 1,776.34
1-1988-2 sets of trench boxes	\$ 9,990.00
1-1989-1 set of trench boxes	\$ 5,140.00
1-1992 Lawn trim mower	\$ 510.00
1-1987 Portable Large meter tester	\$ 1,465.00
1-1992 Portable generator	\$ 1,450.00
1-2003 Portable generator	\$ 842.00
1-1974 meter testing Equipment	\$ 652.00
2-1998 Gas monitors	\$ 4,916.00
1-Aluminum Trench Box	\$ 4,566.50
Miscellaneous Small Tools and Office equipment.	