



**New North Booster Pumping Station  
at Atkinson Park.**



## 2003 DRINKING WATER QUALITY REPORT

*Reporting data collected in 2002*

*We at Henderson Water Utility work around the clock to provide top quality water to every tap.*

*We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.*

## FROM THE GENERAL MANAGER

We hope you have enjoyed this fourth annual report on the quality of Henderson's water as well as the other information included in this communication to you. As you can see from the water quality report, Henderson's water is of an excellent quality. Henderson's water is also an excellent value. From the tap you pay less than a penny for the bottle of water that may cost you a dollar at the supermarket.

Since our report to you last summer, we have worked to improve water pressure in parts of our service area. We constructed a new booster pumping station at Atkinson Park to replace one on Barret Boulevard that we took out of service. This allows us to use the large volume of water stored in the water storage tank at Atkinson Park much more efficiently and to keep more water in reserve should we need it. Summer time is almost here and you are reminded of the separate irrigation meter that you may have installed that may help you save money when watering during dry periods.

We continue to try to make our customers aware of our policy regarding sewer backups and the services we can provide to prevent the backups. If you haven't already done so, I would suggest you carefully read that portion of this report. Our staff stands ready to assist in helping you to prevent a backup on your property. If you feel you are in an at-risk area, please call and take advantage of the technical assistance service that is free for our customers.

Over the next five years we will be incrementally implementing a program to improve our environment by improving the quality of the storm water reaching our streams and the Ohio River. This program is called Phase II storm water and is a federal mandate because Henderson is part of the Evansville "urban area." Information about that program is included in this report.

We continue to look for feed back on the service we provide. When we do work in your area, we put tags on doors in an attempt to let you tell us how we are doing. I encourage you to return those tags. If you are not satisfied with our work, we will continue to work with you to the extent possible to make you a happy customer.

We continue to look for ways to increase the security and safety of our water supply. Please help us by reporting to the Henderson Police Department any suspicious activity that you might observe.

I encourage you to visit our web site at [www.hkywater.org](http://www.hkywater.org) for information about our water wastewater, and storm water programs. If you have suggestions as to how we can serve you better, please do not hesitate to contact us by phone or e-mail.

John Tapp, General Manager

## TYPE AND LOCATION OF WATER SOURCE

The employees of Henderson Water Utility are very excited to provide you with this year's Annual Water Quality Report. We want to keep you informed about the quality of our water and services we deliver to you every day of the year. Our goal is and always will be to provide you a safe and dependable supply of drinking water. We want you to understand the efforts we make continually to improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water remains at the highest possible level.

Our source for surface water comes from the Ohio River at approximately river mile marker 803, or the corner of 5<sup>th</sup> and Water streets in Henderson. Surface water is classified as rivers, lakes, streams, ponds, and reservoirs. As water travels over the surface of the land it dissolves naturally occurring minerals. In some cases, radioactive material can be picked up from the presence

of animal or human activity. Contaminants that may be present in source water include: microbial, inorganic, pesticides and herbicides, organic, and radioactive materials. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of contaminants in water provided by public water systems.

***Drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe drinking water Hotline (800-426-4791).***

***The area around your water source is mostly residential but also contains some industrial activity. A source water***

***assessment with a summary of the system's susceptibility to potential sources of contamination is not due to be completed until later this year; however, a preliminary source water assessment is available. A copy of the plan is available for inspection at the County Judge's office or at the Green River Area Development District office in Owensboro, KY.***

The data presented in this report are from the most recent testing done in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table though representative, may be more than one year old.

# VULNERABILITY

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 infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on ap-

propriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

## DEFINITIONS & ABBREVIATIONS

**Non-Detects (ND)** - laboratory analysis indicates that the contaminant is not present.

**Unregulated Contaminants** - contaminants that require monitoring, but no MCL has been set at this time.

**Not Applicable (N/A)** - Does not apply.

**Below Detection Levels (BDL)** - laboratory analysis indicates that the constituent is not present.

**Parts per million (ppm)** - one part per million corresponds to one minute in two years or a single penny in \$10,000.

**Parts per billion (ppb)** - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

**Nephelometric Turbidity Unit (NTU)** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**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 treatment technique is a required process intended to

reduce the level of a contaminant in drinking water.

**Maximum Contaminant Level (MCL)** - the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**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 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.

**Maximum Residual Disinfectant Level Goal (MRDLG)** - the level of a 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.

Contaminant	Allowable Levels	Highest Single Measurement	Percent Compliance	Violation Y/N	Likely Source of Contamination
Turbidity (NTU)	Less than 0.3 NTU 95% of samples each month	0.355	99	N	Soil runoff

### Regulated Contaminants Test Results

Contaminant (units)	MCL	MCLG	Highest Detection	Range	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	0.005	N/A	7-17-02	N	Discharge of drilling wastes, discharge from metal refineries; erosion of natural deposits
Chlorine (ppm)	MRDL 4	MRDLG 4	1.43 (annual average)	2.2 - 0.14	4th Qtr. 2002	N	Water additive used to control microbes
Copper [1022] (ppm)	AL=1.3	1.3	0.0667 90th Percentile	1 site exceeded the AL	7-20-00	N	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride [1025] (ppm)	4	4	1.18	0.82-1.18	1-12-02	N	Erosion of natural deposits; water additive which promotes strong teeth; discharges from fertilizer and aluminum factories
Lead [1030] (ppb)	AL=15	0	5.8 90th Percentile	1 site exceeded the AL	7-20-00	N	Corrosion of household plumbing systems; erosion of natural deposits
Nitrate [1040] (ppm) (as nitrogen)	10	10	2.25	1.31-2.25	2-20-02	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
HAA5 [Haloacetic acids] (ppb)	60	0	55 (annual average)	21 - 95	4th Qtr 2002	N	By-product of drinking water chlorination
TTHM [Total trihalomethanes] (ppb)	80	0	74 (annual Average)	15 - 126	1st Qtr 2002	N	By-product of drinking water chlorination

### Unregulated Contaminants Test Results

Contaminant (Code)	Unit	Average	Range
Bromodichloromethane [2943]	ppb	12.1	4 - 20
Chloroform [2941]	ppb	25.2	8.8 - 46
Dibromochloromethane (Chlorodibromo) [2944]	ppb	3.8	1.10 - 6.3
Metolachlor [2045]	ppb	0.05	N/D - 0.20

## DETECTS

**Fluoride:** Fluoride has been added to the drinking water for dental health purposes. The water system monitors the fluoride levels on a daily basis and sends out samples twice a month to an independent state certified lab for analysis.

**Nitrates:** As a precaution we always notify physicians and health care providers in this area if there is ever a higher than normal level of nitrates in the water supply.

**Lead:** Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

## CUSTOMERS' RIGHT TO KNOW INFORMATION

**CUSTOMERS' RIGHT TO KNOW INFORMATION:** If you have any questions about this report or concerning your water utility, please contact Jill Carr, at (270) 826-2421. We want our valued customers to be informed about their water utility. If you

want to learn more, please contact us, at the telephone number above, or at [www.hkywater.org](http://www.hkywater.org), or join us at any of our regularly scheduled council meetings. They are normally held on the fourth Tuesday of each month at 4:00 p.m. at the Bob Gish Administration

Building.

The current Water Board Commissioners are: Jeanne Marie Gadiant, Dr. John Dunaway, Dr. William Marshall, Laffoon (Chip) Williams and Rodger Bird.

## SEWER BACKUPS IN HOMES OR BUSINESSES QUESTIONS & ANSWERS

A sewer backup in your home or business caused by a blockage in the Henderson system can be an unfortunate and frustrating situation. The Henderson Water Utility staff takes every

precaution possible to prevent such events from occurring, but occasionally a line blockage or other circumstance can cause a backup to occur in a home or business.

### 1. How do I determine if my home or business is at risk from a sewer backup?

Your home or business is at risk if the elevation of your lowest floor, containing plumbing fixtures or floor drains, is lower than the top of a manhole near your property. The Henderson Water Utility staff will be happy to assist you in determining if your home or business is at risk.

### 2. How do I prevent a backup?

If your home or business is at risk of a backup, to prevent a backup from happening and possibly causing damage to your home or business, HWU strongly suggests you install either a sump pump or a backwater valve. A backwater valve may be required under city ordinance Section 23-18.

A sump pump is the most reliable

alternative; but it is also the most expensive. Below is specific information about a backwater valve including installation and maintenance information. You should contact your plumber for cost information and other details on the installation of a backflow valve or sump pump.

### 3. What do I do if I have a backup?

If you suspect the backup is in your line between the home or business and the main line in the street, call your plumber. If you believe the backup is in HWU's line call us at 826-2824. This number is answered 24 hours a day, seven days a week. If you have a backup and need to contact a company to clean up the area in your home where the backup occurred, HWU can provide you with a list of companies that do this type of clean up.

### 4. Is the Henderson Water Utility or the City responsible for damage from sewer backups?

Unfortunately, because these blockages in the system are random and unpredictable, under Section 23-18 of the City Code, HWU cannot be responsible for any damage to your property from a blockage. However, our staff is available to provide you with any technical assistance necessary as you try to prevent a backup from occurring again. You may call our System Operations Center at 826-2824 and ask for assistance or visit the Center at 230 North Alvasia Street.

### 5. Will my homeowner's insurance cover a sewer backup?

Many homeowners' policies cover damage from sewer backups. Check with your insurance company to see if you're covered.

## Gravity Backwater Valve

### Specifications, Installation, And Inspection/Maintenance

#### Specification

The gravity backwater valve should be a PVC Company part number 375 P for 3", 475 P for 4", and a 675 P for 6", or an approved equal.

#### Installation

The backwater valve should be installed in the sewer line either outside the house or in the floor of the basement. The backwater valve should be accessible for maintenance. If it is installed at a depth of 30" or less below the ground or floor, a meter box or 16" pipe is adequate for the access. If the below ground or below floor elevation is greater than 30", a concrete, PVC or polyethylene pipe manhole of 30" diameter or larger should be installed around the valve to allow access for maintenance.

#### Inspection and Maintenance

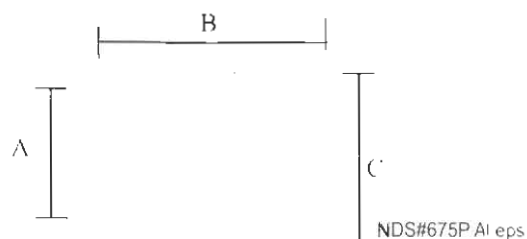
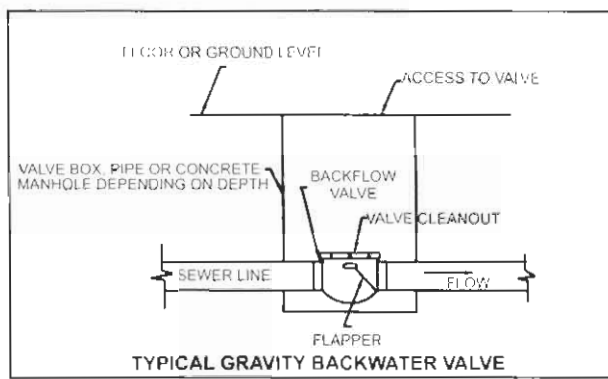
After significant rainfall events or at least once every 6 months the backwater valve should be inspected. The cleanout top should be opened and the flapper in the valve removed and inspected. Before replacing the flapper the inside of the backwater valve should be inspected and the area cleaned as necessary. After replacing the flapper, the cleanout top should be replaced.

#### Gravity Backwater Valve

Description	Part No.	A	B	C
3"	375P	1.5"	7.5"	5.5"
4"	475P	2.0"	10.5"	7.0"
6"	675P	2.25"	15.5"	8.7"

#### How to Specify

NDS #375P, #475P, or #675P PVC Backwater Valve, threaded access cap, elastomeric flapper gasket, neoprene access cap gasket, and removable uni-directional flow flapper.



# CITY OF HENDERSON, KENTUCKY

## PHASE II - SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM STORM WATER QUALITY MANAGEMENT PLAN

The Clean Water Act required the U.S. Environmental Protection Agency (EPA) to promulgate regulations that addressed the water quality impacts from storm water. The initial thrust of this effort was called Phase 1 and was directed at cities in the United States with populations greater than 100,000. In 1999, EPA promulgated rules extending the storm water quality management program to cities less than 100,000 in population. This effort was called Phase 2 and included populated areas outside these Phase 1 cities that were a part of the "urbanized area" of the larger cities as defined by the Bureau of the Census. The City of Henderson was automatically designated in the federal rules as requiring a storm water quality management plan under Phase 2 because it was a part of the Evansville, Indiana "urbanized area."

The Kentucky Natural Resources and Environmental Protection Cabinet, through its primacy permitting agreement with EPA

called the Kentucky Pollutant Discharge Elimination Program (KPDES), is responsible for implementing the Phase 2 storm water program. The Cabinet, acting through the Division of Water, has developed a General Permit for Small Municipal Separate Storm Sewer Systems to implement the Phase 2 storm water program. Henderson has filed a Notice of Intent (NOI) with DOW indicating that Henderson has elected to accept the General Permit in lieu of a permit developed specifically for Henderson. The General Permit requires the implementation of six minimum controls detailed in the Federal rules. The minimum controls are (1) Public Education and Outreach, (2) Public Involvement and Participation, (3) Illicit Discharge Detection and Elimination, (4) Construction Site Runoff Control, (5) Post Construction Management for Development and Redevelopment, and (6) Pollution Prevention and Good Housekeeping.

The Storm Water Management Plan describes the City of Henderson strategy for addressing the water quality impacts of storm water runoff within the corporate limits of the City of Henderson. The strategy listed in the plan implements, over a five-year period, the six minimum controls.

The lead agency in Henderson for this Storm Water Quality Management Plan is the Henderson Water Utility (HWU). Other agencies and entities may be identified through the process to assist HWU. The five years anticipated for full implementation of the Storm water Quality Management Plan ends on March 9, 2008. For more information or a copy of this plan please contact the Henderson Water Utility at (270) 826-2421.