

2011 Water Quality Report



**Leitchfield
Utilities**

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Dear Valued Water Consumer,

Each time you turn on the tap, what's inside your water counts most. And nothing counts more than your health. That's why, water delivered by Leitchfield Water Works meets or surpasses all state of Kentucky and Federal Drinking Water Standards.

Purpose of this Report:

These reports are required of all municipal water agencies by the federal Safe Drinking Water Act. As long as you are a customer of ours you'll receive an annual report like the one you're now reading. Beyond information required by law, Leitchfield Water Works includes information we think you, our customer, will find helpful. This year's report contains test results based on thousands of samples collected from throughout our service area and analyzed during 2010. To enhance the safety and security of our water supply, operators monitor water quality in "real time" 24 hours a day, 365 days a year. Continue reading to learn about the quality of your drinking water, it's sources and more.

Water Plant Location:

The Charles O. Cook Water Treatment Plant at 3245 Lewis School Road was built in 1969 and has had two expansions, 1984 & 1996. The Plant treats surface water from Rough River Lake Reservoir.

How to get involved with concerns about water:

Leitchfield Water Works welcomes your input on all concerns regarding your drinking water. Your questions and observations are an important part of our quality assurance program. Reading this report and becoming involved with our local water issues will help build a strong community dedicated to keeping our water clean and safe. In addition, you are welcome to attend all Leitchfield Utilities Commission meetings held on the first and third Thursday at 5:00 pm. The meetings are held at Leitchfield City Hall located at 314 West White Oak Street.

Thanks from all of us:

Thank you for taking the time to read this report; we hope you have a better understanding of what we do to bring you safe drinking water. If you have any questions or concerns about this report or any other water quality issues, contact Darren Dennison, Chief Operator at Leitchfield Water Works 270-259-4501. We also offer tours of the treatment facility, call us to schedule yours today.

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Table Information:

In addition to the informational section of the Water Quality Report, we have included for your review, several tables. The tables will give you a better picture of the contaminants that were found in your drinking water for the calendar year of 2010 (January 1 - December 31) unless otherwise noted. The Safe Drinking Water Act (SDWA) requires that the highest level detected during the calendar year be provided in this report. Not listed are the more than one hundred other contaminants for which we tested that were not detected at all.

Table Key:

- 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) - a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- ND - not detected in our testing

Table Definitions:

- Action Level (AL) - the concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.
- Treatment Technique (TT) - 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.
- Contaminants - substances detected in your drinking water during the calendar year 2006. All amounts detected were below allowed levels. The SDWA requires the highest level detected during the calendar year be provided in this report.

Setting drinking water standards:

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) has developed regulations limiting the amount of certain contaminants in water provided by public water systems. In the case of bottled water, the Food and Drug Administration (FDA) set forth regulations for contaminants in bottled water.

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that 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).

When you drink water at an MCL level:

MCLs 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.

Why your water needs to be treated:

"Natural" does not always mean "pure". The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity.

Contaminants that may be present in your source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges and farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and even mining activities.

Information about Lead:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Leitchfield Water Works is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>

Cryptosporidium:

Leitchfield Water Works completed our 2 year monitoring plan for crypto in April 2009. The 2 years of sample data was then calculated and bin classifications were assigned. We were assigned a bin 1 classification, which means no further treatment processes are needed for the safe removal of cryptosporidium. If you would like to review the data please contact Chief Operator, Darren Dennison at 270-259-4501.

Unregulated Contaminants:

Our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by USEPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that this data is available for viewing. If you are interested in examining the results, please contact Chief Operator, Darren Dennison at 270-259-4501.

Source water assessment is now available:

A Source Water assessment was completed by Jack Stickney. He is a Source Water Technician for Kentucky Rural Water Association. The following is a summary our system's susceptibility to contamination, which is part of the source water assessment plan he wrote. The Leitchfield Water Works withdraws approximately 1.9 MGD of raw surface water from the Rough River Lake Reservoir. An analysis of the susceptibility of the water system's supply to contamination indicates that this susceptibility is generally moderate. Areas of high concern at the Leitchfield intake consist of Row Crops, and Bridges and Culverts. In and of themselves, these high areas of concern do not represent a danger to the environment. It is the potential for chemical spills, leaks, or hazardous material accidentally spilling into the water source from these sites that gives them a Susceptibility Ranking of High. The overall Susceptibility Ranking for this water source is Moderate. You may view the source water assessment and protection plan anytime; it is located at The Charles O. Cook Water Plant.

Water Quality Test Results

These results represent levels in the potable water supply, based on calendar year 2010.

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.

Regulated Contaminants:

These substances are regulated by the EPA. That means we test for them and they cannot be above a certain level, referred to as the MCL (maximum contaminant level). For additional information on these contaminants, please visit the Environmental Protection Agency's web page at www.epa.gov

Contaminant (units)	MCL	MCLG	Report Level	Range	Date of Sample	Violation Y/N	Likely Source of Contamination
Combined Radium (pCi/L)	5	0	1.5	1.5 - 1.5	April - 08	NO	Erosion of natural deposits.
Atrazine (ppb)	3	3	0.91	0 - 1.63	May - 10	NO	Runoff from herbicide used on row crops.
Simazine (ppb)	4	4	0.07	0 - 0.16	May - 10	NO	Runoff from herbicide used on row crops
Fluoride (ppm)	4	4	1.02	0.8 - 1.27	Aug - 10	NO	Erosion of natural deposits; water additive which promotes strong teeth discharge from fertilizer and aluminum factories.
Nitrate (ppm)	10	10	0.32	0.32	May - 10	NO	Runoff from herbicide use; leaching from septic tanks; sewage; erosion of natural deposits.
Total Organic Carbon (ppm) measured as ppm, but reported as a ratio.*	TT*	N/A	1.10 lowest annual average	1.24 - 3.01 (monthly ratios)	N/A	NO	Naturally present in environment.

*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average of the monthly ratios must be 1.00 or greater for compliance.

Chlorine (ppm)	MRDL: 4	MRDLG: 4	147 annual average	0.4 - 2.2	N/A	NO	Water additive used to control microbes.
Haloacetic acids or HAA (ppb)	MCL: 60	MCLG: N/A	37 annual average	5 - 74	N/A	NO	Byproduct of drinking water disinfection.
THM Total Trihalomethanes (ppb)	MCL: 80	MCLG: N/A	37 annual average	7 - 90	N/A	NO	By-product of drinking water disinfection.

Turbidity:

Turbidity is the measure of the cloudiness of water. Turbidity, by itself, is not harmful, but it can interfere with the disinfection of drinking water. We measure it because it is a good indicator of the effectiveness of the filtration system.

	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation Y/N	Likely Source
Turbidity (NTU) TT	Never more than 1 NTU Less than 0.3 NTU 95% of samples each month.	0.13 NTU	100%	NO	Soil runoff

Lead & Copper

Contaminant (units)	Action Level	MCLG	90 th percentile results	Range of Detection	Date of Sample	Violation Y/N	Likely Source of Contamination
Lead (ppb)	AL=15	0	0	0 - 7	June - 10	NO	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	AL = 1.3	1.3	0.22	0 - 0.383	June - 10	NO	Corrosion of household plumbing systems; erosion of natural deposits

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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 appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Kentucky Drinking Water Program Recognizes 39 Water Plants

On March 28, 2011, at the 54th annual Kentucky Water and Wastewater Operators Association conference in Louisville, Leitchfield Water Works was recognized for the 3rd year in a row by the Kentucky Division of Water (KDOW). KDOW evaluated 156 surface water treatment plants and of those 156 plants 39 were recognized for meeting optimized water quality goals for particle and microbial removal in 2010. Particle and microbial removal, measured as turbidity, is critical for producing water that is free from bacteria, viruses and other microbes that can cause disease. Through the Area-Wide Optimization Program (AWOP), Kentucky drinking water systems are voluntarily asked to reduce turbidity levels below those required by regulation, further protecting the consuming public from water-borne diseases. The Program focuses on those plants that treat rivers or reservoirs (surface water) and has 2 turbidity goals that are to be met in order to be a "totally" optimized water plant for particle and microbial removal.

The turbidity goals are as follows:

Settled water turbidity goal of less than 2.0 NTU 95% of the time Leitchfield Water Works exceeded that goal by having less than a 2.0 NTU 98% of the time!

Combined filter turbidity goal of less than .10 NTU 95% of the time Leitchfield Water Works exceeded that goal by having less than a .10 NTU 100% of the time!



LEITCHFIELD UTILITIES WATER PLANT EMPLOYEE RECEIVES AWARD

Leitchfield, Kentucky, (12/07/10) – Leitchfield Utilities Water Treatment Plant, (LWTP) Chief Operator, Darren Dennison recently received the "2010 Operator of the Year" award from the Central Kentucky Water and Wastewater Operators Association (CKWWOA). The award recognizes members of the CKWWOA in good standing with 10 years or more of professional involvement in the water industry who have demonstrated outstanding service in the field of water operations and has shown a commitment to the technical progression of operation, maintenance and/or water quality.

The CKWWOA Chapter of Kentucky Water/Wastewater Operators Association (KWWOA) is made up of the following counties: Adair, Allen, Barren, Breckinridge, Bullitt, Butler, Casey, Clinton, Cumberland, Edmonson, Grayson, Green, Hardin, Hart, Jefferson, LARue, McCreary, Meade, Metcalfe, Monroe, Nelson, Oldham, Pulaski, Russell, Taylor, Warren, Wayne.



City of Leitchfield Water Towers

Leitchfield Water Works Mission Statement

The mission of Leitchfield Water Works is to supply an uninterrupted, properly treated, safe potable drinking water to be distributed to the residents of Leitchfield and all our water customers for the lowest practical costs in a prudent, reasonable and responsible manner.

Proper treatment and distribution is that which suitably exceeds the minimum requirements established by the United States Environmental Protection Agency and the Kentucky Division of Water.

The lowest practical level of cost is not the absolute least expenditure, but rather the level of funding that permits proper balancing of both immediate and long term needs, and operate the treatment facility efficiently, effectively and safely, bearing in mind our responsibility to be a good steward of the environment.

A prudent, reasonable and responsible manner of accomplishing this mission includes:

- Recruiting and retaining a qualified, professional and productive work staff.
- Maintaining a workplace environment where excellence is valued and creativity, teamwork and open communication are actively encouraged.
- Treating the customer with the respect and courtesy they deserve.
- Providing the superintendent and utility commission members with factual and relevant information on which they can make informed decisions to maintain and protect the community's investment in the treatment facility and its equipment.