



2017 Annual Water Quality Report
Edmonson County Water District
 PWSID# 0310114 Facilities A & B
 Water testing performed in 2016

We are pleased to present this years Annual Water Quality Report. This report is designed to inform the public about the quality of water and services provided on a daily basis. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our customers and resources. We are committed to ensuring the quality of your water with lines in Edmonson, Hart, Grayson, Warren and Butler Counties with a combined total population of over 27,300 people. Brownsville WTP is our facility "A" and serves over 14,600 people and Wax WTP is our "B" facility and serves over 12,700 people.

In conjunction with the Barren River Area Development District, Edmonson Co. Water District has developed a Source Water Assessment and Protection Plan for Brownsville WTP "A" and with The Lincoln Trail Area Development District for Wax WTP "B". Both are classified as surface water treatment facilities. The Brownsville WTP draws water from Green River and Wax WTP draws water from Nolin Reservoir. The susceptibility of contaminants is in the moderate category due to the route of the rivers. The rivers pass through towns, under bridges on major roads, close to underground storage sites, agriculture activities and oil and gas production facilities. A complete source water assessment can be obtained and viewed at the Edmonson Co. Water District office located at 1128 Hwy. 259 N, Brownsville, KY between 8am and 4:30pm Mon-Fri. Our regular scheduled board meetings are on the 2nd and 4th Tues. at 8:30am at the Water District Office. Also available by request is a complete list and report of all parameters of contaminants that are sampled for each year.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Our commitment is to provide our customers with a safe, clean, and reliable supply of drinking water. We would like the public to be assured that we will continue to monitor, improve, and protect the water system and deliver a high quality water direct from the tap. We know that water is the most indispensable product in every home and we ask everyone to be conservative and help us in our efforts to protect the water sources and the water system. Please report any activity that might jeopardize the water supply.



"Thank You" if you have reported a leak.
Please continue helping us watch for leaks.

www.ecwdwater.com

The Edmonson County Water District's Goal is to continually improve the water facilities that provide you "our customers" with a safe and dependable supply of drinking water. We want you to be aware of the efforts we make daily to provide this service.



The Edmonson County Water District is blessed with two excellent sources of Raw Water. Please help keep pollution out of these waters. Always follow direction when applying sprays and fertilizer. Please do not dump trash of any sort into these streams. The cleaner the Raw Water supply, the less treatment is required.



Brownsville WTP



The Brownsville WTP is on Green River being our facility "A", that serves over 14,600 people and our Wax WTP is on Nolin Lake being our facility "B", that serves over 12,700 people.

Wax WTP



Please visit our website at www.ecwdwater.com. We now provide online service that includes bill payment, history and usage reports.

PWSID# 0310114
 P.O. Box 208 • Brownsville, KY 42210
 System Manager: Tony Sanders
 270-597-2165
 CCR Contact: Tim Brewster
 270-597-3591

The Water District also consists of approximately 693 miles of water mains in Edmonson, Hart, Grayson, Warren and Butler Counties, 19 storage tanks, main office building, and 3 maintenance and storage buildings. The Water District will continue to provide its 10,000± customers with dependable service at a reasonable price.



Our Treatment Plant and Distribution Line Operators are license professionals that work long hours seven (7) days a week, three hundred sixty-five (365) days a year so that you are provided with quality service. The Water Districts Wastewater division provides service on the north side of Green River to customers within the city limits of Brownsville; the Water District also supplies sewer service to customers in the Chalybeate, New Grove, Pig Road and 31-W areas. Anyone desiring to hook on to the Sewer System or has questions can contact the Water District office.



Contaminant	Sample Date	MCL		Amount Detected		Range		Violation	Likely Source
		MCLG	MCL	1.0 (ratio avg.)	2	1.1 - 1.8	1.2 - 2.6	N	
Turbidity	A= Never more than 1.0 B= NTU. Less than 0.3 NTU 95% of samples			0.28	100%	No	No	Soil Runoff	
Total Organic Carbon (ppm)	A= Monthly B= Monthly	1.0 (ratio avg.)	2	1.6	1.1 - 1.8	N	N	Naturally present in environment	
Copper (ppm)	D= Sept 2014	AL= 1.3	0	0.021 (90th percentile)	.01 to .46	N	N	Corrosion of household plumbing systems	
Lead (ppb)	D= Sept 2014	AL= 15	0	2.1 (90th percentile)	1.0 to 3.3	N	N	Corrosion of household plumbing systems	
Chlorine (ppm)	A= Daily 2016 B= Daily 2016	MRDL 4	MRDLG 4	0.50- 2.31 1.20 - 2.30	0.5 to 2.31 1.2 to 2.3	N	N	Water additive used to control microbes	
Fluoride (ppm)	A= Apr. 19, 2016 B= Apr. 19, 2016	4	4	0.8 0.90		N	N	Water additive which promotes strong teeth	
HAA5 (Haloacetic Acids) (ppb)	D= Highest 2016 Qtrly Avg.	60	N/A	31.5 (highest avg)	14.0 to 42	N	N	Byproduct of drinking water disinfection	
TTHM (total trihalomethanes) (ppb)	D= Highest 2016 Qtrly Avg.	80	N/A	40 (highest avg)	14 to 54.2	N	N	Byproduct of drinking water disinfection	
Nitrate (ppm)	A= Feb 2016 B= Feb 2016	10	0	1.6 2.8	0.0 to 1.6 0 to 2.8	N	N	Fertilize use, leaching from septic tanks, erosion of natural deposits	
Dalapon (ppb)	A= 10/2015, 2/2016 B= 10/2016	200	200	<22.0 -	0--22.0 -	Y	-	Runoff from herbicide used on rights of way	
Sodium (ppm)	A= Apr & Aug 2016 B= Apr & Aug 2016	-	20 Optimum	4.5 (avg.) 7.0 (avg.)	4.0 to 5.0 6.0 to 8.0	N	N		
Atrazine	B= 3rd. Qtr. 2016	3	3	0.38	0.0 - 0.38	Y	Y	Runoff from herbicide used on rights of way	

Mthly ratio is the % TOC removal achieved to the % TOC removal required. Lowest annual avg. of ratios must be 1.00 or greater.

Some or all of these definitions may be found in this report:
Nephelometric Turbidity Unit (NTU) - A measure of the clarity of water. Turbidity has no health effects. However, turbidity can provide a medium for microbial growth. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

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.

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

Not Applicable (N/A) - does not apply.

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) - or micrograms per liter, (µg/L). One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system shall follow.

Treatment Technique (TT) - a required process intended to reduce the level of a contaminant in drinking water.

Total Organic Carbon (TOC) - has no health effects. However, total organic carbon, provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes, or THMs, and haloacetic acids, or HAAs. Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

MRL-Minimum Reporting Level

NDS-No Data Submitted

Our water system violated one or more drinking water requirements over the past year. Even though these were not emergencies, as our customers, you have the right to know what happened and what we are doing or did to correct these situations. We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the periods listed below, we did not monitor or test for the listed contaminants and therefore cannot be sure of the quality of your drinking water during that time.

There is nothing you need to do at this time. The table below lists the contaminants we did not properly test for during the last years, how often we are supposed to sample for the listed contaminants, how many samples we are supposed to take, how many samples we took, when samples should have been taken, and date samples have been taken, and date on which follow-up samples were or will be taken.

The following is a list of Edmonson County Water District's compliance determinations and description of each contaminant and its potential health effects as outlined by Federal EPA Guidelines.

Notice of Violations:

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the periods listed below, we did not monitor or test for the listed contaminant(s) and therefore cannot be sure of the quality of your drinking water during that time.

#1. In March, 2017 the Edmonson County Water District received 3 notices of violation from the division of water for failure to sample for Dalapon, a synthetic organic parameter, for the 4th qtr. of 2015 qtr., 1st qtr. of 2016 and the 4th qtr. of 2016. Although 4 consecutive quarters were sampled with less than 0.00022 mg/l results being returned between Nov. 2014 and Aug. 2015, the Division of Water issued violations for not receiving a letter from the Water District requesting reduced monitoring. The violations received were for each quarter the letter had not been received.

The Water District has submitted the required request letter for reduced monitoring.

There are no health effects associated with this violation and if there were our customers would have been notified immediately.

#2. The Edmonson County Water District received a notice of violation in November 2016 for routine monitoring /reporting. On the August 2016 Monthly Operating Report, the required sample results for Chlorine analysis were inadvertently omitted from page 7, day 31. The Edmonson County Water District has since submitted the required missing day of analysis.

There are no health effects associated with this violation and if there were our customers would have been notified immediately.

#3. In March 2017, the Edmonson County Water District received a notice of violation for the Wax WTP for non-submittal of an Atrazine sample during the third quarter of 2016. The Atrazine sample, which is part of our routine Synthetic Organic Contaminants monitoring, was submitted as required but had to be re-sampled due to container failure which resulted in the sample being submitted in the fourth quarter of 2016.

There are no health effects associated with this violation and if there were our customers would have been notified immediately.

#4. In April 2017, Edmonson Co. Water Dist. Brownsville WTP received a notice of violation for failure to sample E. coli when conducting our Cryptosporidium/Giardia sampling during January 2014 thru December 2015. The E. coli monitoring along with turbidity of the raw (un-treated) water was to be conducted by our contract laboratory and was inadvertently omitted from the sampling process.

There are no health effects associated with this violation and if there were our customers would have been notified immediately.

The Edmonson Co. Water Dist. will re-start the Cryptosporidium/Giardia sampling cycle again in 2017.

#5. In April 2017, Edmonson Co. Water Dist. Wax WTP received a notice of violation for failure to sample E. coli when conducting our Cryptosporidium/Giardia sampling during January 2014 thru December 2015. The E. coli monitoring along with turbidity of the raw (un-treated) water was to be conducted by our contract laboratory and was inadvertently omitted from the sampling process.

There are no health effects associated with this violation and if there were our customers would have been notified immediately.

The Edmonson Co. Water Dist. will re-start the Cryptosporidium/Giardia sampling cycle again in 2017.

#6. The Edmonson Co. Water Dist. received a notice of violation for listing our fluoride readings from the state health dept. analysis for both of our treatment facilities instead of the fluoride results from our Inorganics analysis. There were no health effects associated with this violation and if there were our customers would have been notified immediately.

The Edmonson Co. Water Dist. has shown Fluoride results from the Inorganics analysis for this report and will do so in the future Consumer Confidence Reports as well.

For more information contact Tim Brewster, ECWD Compliance Officer at P.O. Box 208, Brownsville, KY 42210.

Edmonson County Water District routinely monitors for constituents in your drinking water according to Federal and State Laws. This report shows the detected contaminant results of our monitoring for the period of January 1st to December 31, 2016. Some contaminants are not required to be tested for every year, therefore, for some, we are reporting for the most current data available. Contact the Edmonson County Water District for a complete listing of all the contaminants tested for during the year. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. 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. We are required to monitor the source of your drinking water for Cryptosporidium in order to determine whether treatment is adequate to remove Cryptosporidium from your drinking water. EPA Centers for Disease Control (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.

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 may pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wild life. Inorganic contaminants, such as salts and metals, that may be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban storm water runoff, and septic systems. Radioactive contaminants, which may be naturally-occurring or be the result of oil and gas production and mining activities. To ensure that tap water is safe to drink, U.S. EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. U.S. FDA regulations establish limits for contaminants in bottled water that shall provide the same protection for public health.

Drinking water, including bottled water, may reasonably be 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 may be obtained by calling Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791.

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. Edmonson Co. Water District 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>.

**The next compliance sampling period for Edmonson County Water District for lead and copper is scheduled for June-September 2017.