DUCK RIVER UTILITY COMMISSION
2012 WATER QUALITY DATA

QUALITY ASSURANCE

In order to ensure that tap water is safe, the U.S. Environmental Protection Agency prescribes regulations that require utilities to monitor regularly for numerous substances in the water it produces. An independent laboratory certified by the EPA and the State of Tennessee performs this testing. All testing is conducted in compliance with current regulations. **The water produced by the DRUC has never exceeded the limits for any regulated compound or substance as established by the State of Tennessee or U. S. EPA.**

TEST RESULTS – NONE DETECTED:

Analysis is routinely performed for the following list of substances. **NONE** were detected in the water.

PRIMARY ORGANICS	VOLATILE ORGANICS	VOLATILE ORGANICS	INORGANICS	SYNTHETIC ORGANICS	SYNTHETIC ORGANICS
Alachlor	Bromobenzene	Dichloropropane	Arsenic	Carbofuran	Metolachlor
Aldicarbs	Bromochloromethane	Dichloropropene	Antimony	Chlordane	Metribuzin
Benzene	Bromodichloromethane	Ethylbenzene	Beryllium	Dalapon	Oxamyl
CarbonTetrachloride	Bromomethane	Fluorotrichloromethane	Cadmium	Dicamba	PCB 1016
Dichloroethane	Butylbenzene	Hexachloro-1,3-butadiene	Chromium	Dieldrin	PCB 1221
Dichloroethylene	Chlorobenzene	Isopropylbenzene	Cyanide	Dinoseb	PCB 1232
Endrin	Chlorodibromomethane	p-Isopropyltoluene	Mercury	Di(2-ethylhexyl)adipate	PCB 1242
Lindane	Chloroethane	Naphthalene	Nickel	Di(2-ethylhexyl)phthalate	PCB 1248
Methoxychlor	Chloromethane	n-Propylbenzene	Selenium	2,3,7,8-TCDD (Dioxin)	PCB 1254
Paradichlorobenzene	o-Chlorotoluene	Styrene	Thallium	Endothall	PCB 1260
Toxaphene	p-Chlorotoluene	Tetrachloroethane	**SYNTHETIC ORGANICS**	Ethylene dibromide	Pentachlorophenol
Trichloroethane	Dibromomethane	Tetrachloroethylene	Aldicarb	Glyphosate	Picloram
Trichloroethylene	m-Dichlorobenzene	Toluene	Aldicarb Sulfone	Heptachlor	Propachlor
VinylChloride	o-Dichlorobenzene	Trichlorobenzene	Aldicarb Sulfoxide	Heptachlorepoxide	Simazine
2,4-D	Dichlorodifluoromethane	Trichloroethane	Aldrin	Hexachlorobenzene	**RADIONUCLIDES**
2,4,5-TP (Silvex)	Dichloroethane	Trichloropropane	Butachlor	Hexachlorocyclopentadiene	Gross Alpha
ASBESTOS	Dichloroethylene	Trimethylbenzene	Benzo(a)pyrene	3-Hydroxycarbofuran	Radium 226
Asbestos Fibers	Dichloromethane	Xylene	Carbaryl	Methomyl	

TEST RESULTS – REQUIRED REPORTING OR DETECTED COMPOUNDS

The following water quality analysis and testing information is required reporting or are substances that were detected in the drinking water.
All of the substances that were detected are present at levels well below the U. S. EPA limits and do not pose a health risk to the general public.

Substance (units)	EPA Limit (MCL)	DRUC Maximum	DRUC Range	EPA Goal (MCLG)	Possible Source of the Contaminant
Microbial Contaminants					Very small organisms such as bacteria
Total Coliform (# Positive)	< 2	0	0	0	Naturally present in the environment
Fecal Coliform & E. Coli (# Positive)	0	0	0	0	Human and animal fecal waste
Total Organic Carbon (ppm)*	TT*	2.2	1.1 - 2.2	N/A	Naturally present in the environment
Turbidity (NTU)*	TT*	0.07	0.02 - 0.07	N/A	Turbidity does not present any risk to your health and is measured to assess the effectiveness of the filtration system.
Combined Radium (pCi/l)	5	1.5	1.5	0	Erosion of natural soil deposits
Inorganic Compounds					**Substances of mineral origin**
Chlorine (ppm)	MRDL = 4	2.18	0.37 - 2.18	MRDLG = 4	Water additive used to control microbes
Chlorine Dioxide (ppb)	800	200	0 - 200	800	Water additive used to control microbes
Chlorite (ppm)	1	0.14	0.00 - 0.14	0.80	Byproduct of drinking water chlorination
Fluoride (ppm)	4	0.73	0.64 – 0.73	4	Added to prevent tooth decay, natural erosion
Nitrate (ppm)	10	0.5	0.5	10	Agricultural runoff, natural erosion, sewage discharge
Sodium (ppm)	N/A	2.6	2.6	N/A	Natural erosion, component of water additives
Copper (ppm) None of 60 samples exceeded action limit	AL = 1.3	0.21	0.00 - 0.45	1.3	Corrosion of household plumbing, - 2011 Data
Lead (ppb) Five of 60 samples exceeded action limit	AL = 15	9	0 - 47	0	Corrosion of household plumbing, - 2011 Data
Organic Compounds					**Natural or synthetic carbon based compounds**
Haloacetic Acids Total (ppb)	60	53	21 - 48	0	Byproduct of drinking water disinfection
Trihalomethanes Total (ppb)	80	52	26 – 58	0	Byproduct of drinking water disinfection

DEFINITIONS: MCL: Maximum Contaminant Level, or 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. MCLG: Maximum Contaminant Level Goal, or 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. MRDL: Maximum Residual Disinfectant Level, or the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants. MRDLG: Maximum Residual Disinfectant Level Goal, or 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 the disinfectants to control microbial contaminants. AL: Action Level, or the concentration of a contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow. TT: Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water. BDL: Below the Detection Limit. ppb: Parts per billion or micrograms per liter (explained in terms of money as one penny in $10,000,000.00. ppm: parts per million or milligrams per liter (explained in terms of money as one penny in $10,000.00. pCi/L: picocuries per liter. NTU: Nephelometric Turbidity Unit; Turbidity is a measure of the clarity of the water. Turbidity in excess of 5 NTU becomes just noticeable to the average person. * The Treatment Technique requirements for both Turbidity and Total Organic Carbon were met throughout the year.

USEPA NOTICE ON 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. DRUC 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, test methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead . THERE IS NO LEAD IN THE WATER PRODUCED BY THE DRUC WATER TREATMENT PLANT.

SOURCE WATER MONITORING TEST RESULTS: The DRUC water source, Normandy Reservoir, is very clean and the DRUC encounters no difficulty in treating the water to EPA and State of Tennessee standards. The DRUC routinely monitors the reservoir water for various contaminants and any indication of potential pollution. Prevention of pollution of our water source is one of our highest priorities. Below is a summary of recent source water testing in cooperation with other agencies including the USEPA, State of Tennessee and Tennessee Valley Authority. NONE of these contaminants have ever been found in the treated water distributed to customers. These tests are strictly the results of testing on raw untreated water from Normandy Reservoir.

CRYTOSPORIUDIUM OOCYSTS: From 2003 to 2005, the DRUC completed 24 months of testing on **reservoir water** for this common organism that can be found in nature, mostly as a result of the presence of wildlife and livestock animals. During only 5 of the 24 monthly sampling events were oocysts detected. Those five samples ranged from 1 to 17 oocysts/liter of reservoir water. The test results are very low indicating little contamination of the reservoir from livestock or wildlife. NOTE: Federal regulations now require all surface water systems serving more than 10,000 people to sample for Cryptosporidium. The DRUC had already completed this required testing. Cryptosporidium is a microbial parasite which is found in surface waters throughout the United States. **No cryptosporidium oocysts were detected in any drinking water samples from DRUC.** Cryptosporidium is effectively removed by filtration and the DRUC system currently provides treatment which is designed to remove cryptosporidium. The USEPA has determined that the presence of cryptosporidium at the concentration level reported in our source water is insignificant, based on the level of treatment we currently provide. Symptoms of cryptosporidium infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals are able to overcome the disease within a few weeks. However, immune-compromised people have more difficulty and are at greater risk of developing severe, life threatening illness. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to prevent infection. For more information on Cryptosporidium, contact the Safe Drinking Water Hotline (800-426-4791).