



Water...the real taste of life!

# 2012 Water Quality Report for The City of Lakewood

Este informe contiene información muy importante. Tradúscalo ó hable con alguien que to entienda bien

## What is this report about?

Metro Water Services purchased water from the Old Hickory Utility District (OHUD) to provide water to Lakewood customers. The State of Tennessee and the United States Environmental Protection Agency require that the public water systems annually report the analyses of their drinking water. The Old Hickory Utility District is required to monitor and analyze their water on a regular basis to ensure safety. This report reflects the results of those analyses.

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## Your Water Source

Old Hickory Utility District draws its water from Old Hickory Lake. Old Hickory Utility District's stated goal is to protect its water from contaminants. They work closely with the State Department of Environment and Conservation (TDEC) to assess the status of our water source for contamination based on geologic factors and human activities in the vicinity of the water source. TDEC has rated our source as reasonably susceptible.

Specific information about Old Hickory Utility District and its Source Water Assessment Program (SWAP) Report from TDEC can be viewed online at [www.tn.gov/environment/dws/dwsasses.shtml](http://www.tn.gov/environment/dws/dwsasses.shtml) or you may contact the Old Hickory Utility District or TDEC at (1-888-891-TDEC) (1-888-891-8332) to obtain copies of specific assessments.

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## Drinking Water Sources

The sources of drinking water (both tap water and bottled water) include lakes, streams, ponds, reservoirs, springs, wells and, in Lakewood's case, Old Hickory Lake. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and radioactive material and can pick up substances resulting from the presence of animals or from human activity.

Impurities that may be present in source water include:

- (A) Biological contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm run-off, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater run-off, and residential uses.
- (D) Organic chemicals, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, stormwater run-off, and septic systems.
- (E) Radioactive materials, which can be naturally-occurring or can be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency prescribes regulations that limit the amount of certain impurities in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water.

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 can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

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## Important Health Information

Some people may be more vulnerable to impurities in drinking water than the general population. Immuno-compromised people such as people with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infection. These people should seek advice about food preparation, handling infants and pets, personal sanitation, and drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800-426-4791).

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## How You Can Get Involved??

The Water Board meets on the second Tuesday of each month at 5:00 p.m. in the Old Hickory Utility District office located at 1050 Donelson Avenue. As a customer, you are welcome to participate in these meetings.

**WATER QUALITY TABLE** (on back)

Most of the data presented in the table below is taken from testing performed between January 1 through December 31, 2011. Old Hickory Utility District monitors for some contaminants less than once per year. For those contaminants, the date of the last sample is shown in the table.

| Contaminant                     | Violation Yes/No | Level Detected             | Range of Detections | Date of Sample | Unit Measurement    | MCLG | MCL     | Likely Source of Contamination  |
|---------------------------------|------------------|----------------------------|---------------------|----------------|---------------------|------|---------|---|
| Total Coliform Bacteria *1      | No               | 0%                         |                     | 2011           | Presence or Absence | 0%   | 5%      | Naturally present in the environment  |
| Turbidity *2                    | No               | 0.28                       | 0.031-0.280         | 2011           | NTU                 | n/a  | TT      | Soil runoff   |
| Lead *3                         | No               | 90 <sup>th</sup> % = .0017 |                     | 2011           | ppb                 | 0    | AL = 15 | Corrosion of household plumbing systems; erosion of natural deposits  |
| Copper                          | No               | 90 <sup>th</sup> % = .53   |                     | 2011           | ppm                 | 1.3  | AL=1.3  | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives                    |
| Fluoride *4                     | No               | 0.73 avg.                  | 0.06 – 1.37         | 2011           | ppm                 | 4    | 4       | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Sodium                          | No               | 3.9                        |                     | 2011           | ppm                 | n/a  | n/a     | Erosion of natural deposits; used in water treatment  |
| TTHM *5 (Total Trihalomethanes) | No               | 52.5 avg.                  | 29.0-67.1           | 2011           | µg/L                | 0    | 80      | By-product of drinking water disinfection   |
| HAA5 (Haloacetic Acids)         | No               | 44.6 avg.                  | 24.8-51.3           | 2011           | µg/L                | 0    | 60      | By-product of drinking water disinfection   |
| Total Organic Carbon *6         | No               | 1.29 avg.                  | 1.14-1.57           | 2011           | ppm                 | TT   | TT      | Naturally present in the environment  |
| Nitrate *7 (as Nitrogen)        | No               | 0.39                       |                     | 2011           | ppm                 | 10   | 10      | Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits                               |

| Contaminant | Violation Yes/No | Level Detected | Range of Detections | Date of Sample | Unit Measurement | MRDLG | MRDL | Likely Source of Contamination          |
|-------------|------------------|----------------|---------------------|----------------|------------------|-------|------|---|
| Chlorine    | No               | 1.84 avg.      | 0.69-2.80           | 2011           | ppm              | 4     | 4    | Water additive used to control microbes |

- **MCLG** - Maximum Contaminant Level Goal, The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.
- **MCL** - Maximum Contaminant Level, The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.
- **MRDL** - Maximum Residual Disinfectant Level, 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, 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.
- **AL** - Action Level, The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
- **ppm** - Parts per million or Milligrams per liter (mg/l) – explained as a relation to time and money as one part per million corresponds to one minute in two years or a single penny in \$10,000.
- **ppb** - Parts per billion Micrograms per liter, explained as a relation to time and money as one part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000.
- **NTU** - Nephelometric Turbidity Units Standard, units for measurement of water clarity. Turbidity does not present any risk to your health. Old Hickory Utility District monitors turbidity, a measure of the cloudiness of water, because it is a good indicator that the filtration system is functioning properly.
- **TT** - Treatment Technique, A required process intended to reduce the level of a contaminant in drinking water.
- **µg/L** – Micrograms per liter or parts per billion.

During the most recent round of Lead and Copper testing, only 1 out of 20 households sampled contained concentrations exceeding the action level.

- \*1 During 2011, MWS collected 54 Total Coliform Bacteria samples. 0 out of 54 tested positive for total coliforms. .
- \*2 100% of our samples were below the turbidity limit of 0.300 NTU. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration process.
- \*3 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. Old Hickory Utility District and Metro Water Services are 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>.
- \*4 The Old Hickory Utility District failed to collect a Fluoride Quality Check Sample to be analyzed by an outside certified lab during the 2<sup>nd</sup> quarter of 2011. The District's quality check samples during the 1<sup>st</sup>, 3<sup>rd</sup> and 4<sup>th</sup> quarter of 2011 had an average fluoride concentration of 0.59 mg/L. The District also analyzed daily fluoride concentrations in-house. The in-house samples had a concentration of 0.73 mg/L.
- \*5 While your drinking water meets EPA's standards for trihalomethanes,(THM) it does contain low levels. Some people who drink water containing THMs in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems and may have an increased risk of getting cancer.
- \*6 We have met the treatment technique requirements for Total Organic Carbon removal in 2011.
- \*7 Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High Nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agriculture activity. If you are caring for an infant you should seek advice from your health care provider.