# JACKSON COUNTY PWSD #13 MO1024279

# 2011 ANNUAL WATER QUALITY REPORT

**Is our water system meeting other rules which govern our operations?**

The Missouri Department of Natural Resources regulates our water system and requires us to test our water on a regular basis to ensure its safety. Our system has been assigned the identification number MO1024279 for the purposes of tracking our test results. Our water is routinely tested for a variety of contaminants. The detectable results of these tests are on the following pages of this report. Any violations of State requirements or standards will be further explained later in this report.

**PLEASE NOTE THE FOLLOWING VIOLATION FOR P.W.S.D. #13 AS PUBLISHED IN THE LEE'S SUMMIT JOURNAL ON 12-23-11. Dear Customers of Jackson County Public Water Supply District #13: We are notifying you of an administrative oversight which took place in our ongoing program to monitor for total coliform bacteria. During the month of October, 2011, samples were not collected in a timely manner. All prior and subsequent testing has demonstrated all samples are in compliance with Missouri Department of Natural Resources guidelines. This administrative oversight was discovered by our own internal audit and reported to the Missouri Department of Natural Resources. Mo. DNR rules require us to publish this notice.**

**How might I become actively involved?**

If you would like to observe the decision-making process which affects drinking water quality or, if you have any further questions about your drinking water report, please contact Charles Dellario at 816-578-2249. If you would like to learn more, please attend any of our regularly scheduled meetings which are held at 6:00 P.M. on the second Tuesday of each month at our office located at: 99 Lake Lotawana Rd., Lake Lotawana, MO. 64086-9715

**Do I need to take special precautions?**

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 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).

## CONTAMINANTS REPORT

DEFINITIONS:

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. MCLG's allow for a margin of safety.

MCL: Maximum Contaminant Level or 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.

AL: Action Level or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

TT: Treatment Technique or a required process intended to reduce the level of a contaminant in drinking water.

90$^{th}$. Percentile: For Lead and Copper testing. 10% of test results are above this level and 90% are below this level.

Level Found: Is the average of all test results for a particular contaminant.

Range of Detections: Shows the lowest and highest levels found during a test period. If only one sample was taken, this number equals the Level Found.

# JACKSON COUNTY PWSD #13 MO1024279

# 2011 ANNUAL WATER QUALITY REPORT

We are very pleased to provide you with this year's Annual Quality Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been to provide to you a safe and dependable supply of drinking water.

**What is the source of my water?**

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater 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 from human activity.

**Our water comes from the following source(s):** **TRI-COUNTY WATER AUTHORITY: MO1071079**

**Groundwater-wells located in the Missouri River Alluvium.**

**We have an award winning Groundwater Protection Plan**

**which controls activity around the wells.**

**Why are there contaminants in my 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 (800-426-4791).

Contaminants which may be present in source water include:

A. Microbial 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 stormwater runoff, 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, urban stormwater runoff, and residential uses.

D. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes, petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.

E. Radioactive contaminants which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Department of Natural Resources prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Department of Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

MRLDG: Maximum Residual Disinfectant Level Goal or the level of a drinking water disinfectant below which there is no known or expected risk of health.

MRDL: Maximum Residual Disinfectant Level or the highest level of a disinfectant allowed in drinking water.

ABBREVIATIONS:

PPB: Parts per billion or micrograms per liter.

PPM: Parts per million or milligrams per liter.

n/a: Not Applicable

NTU: Nephelometric Turbidity Unit used to measure cloudiness in drinking water.

MFL: Million fibers per liter used to measure asbestos concentration.

nd: Not detectable at testing limits.

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. Records with a sample year more than one year old are still considered representative.

# REGULATED CONTAMINANTS REPORT

| INORGANIC | UNITS | MCL | MCLG | Level Found | Range of Detection | Violation | Sample Year |
|---|---|---|---|---|---|---|---|
| ARSENIC | ppb | 10 | n/a | <1 | <1-1.69 | NO | 2011 |
| Sources of Arsenic: Erosion of natural deposits; runoff from orchards, runoff from grass and electronics plant wastes | | | | | | | |
| BARIUM | ppb | 2000 | | 49.3 | 36.2-49.3 | NO | 2011 |
| Sources of Barium: Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits | | | | | | | |
| CHROMIUM | ppb | 100 | 100 | 1.72 | 1.72 | NO | 2011 |
| Sources of Chromium: Discharge from steel and pulp mills; erosion of natural deposits | | | | | | | |
| FLUORIDE: | ppm | 4 | 4 | 0.1700 | 0.16-0.18 | NO | 2011 |
| Sources of Fluoride: Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories | | | | | | | |
| NITRATE +NITRITE (as N): | ppm | 10 | 10 | 0.08 | <0.05-0.13 | NO | 2011 |
| Sources of Nitrate+Nitrite (as N): Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits | | | | | | | |
| DISINFECTION BY-PRODUCTS: | UNITS | MCL | MCLG | Level Found | Range of Detection | Violation | Sample Year |
| TOTAL TRIHALOMETHANES (TTHM) | ppb | 80 | n/a | 2.61 | <2.0-19.4 | NO | 2010 |
| TOTAL HALOACETIC ACIDS (THAA) | ppb | 60 | n/a | <8.1 | 4.76-15.3 | NO | 2010 |
| Sources of TTHM and THAA: By-products of drinking water chlorination | | | | | | | |

Copper

| Collection Period | Unit | 90th. Percentile | Range | Action Level | Sites Over AL | Sources |
|---|---|---|---|---|---|---|
| 2008-2010 | h g/L | 119 | 0.0168-0.179 | 1.3 | 0 | Corrosion of household plumbing systems |

LEAD

| | | | | | | |
|---|---|---|---|---|---|---|
| 2008-2010 | h g/L | 2.05 | 1.05-24.7 | 15 | 1 | Corrosion of household plumbing systems |

OPTIONAL MONITORING (Not Required By EPA)

| INORGANIC | UNITS | LEVEL FOUND | RANGE OF DETECTIONS | SAMPLE YEAR |
|---|---|---|---|---|
| ALKALINITY, CACO3 STABILITY | ppm | 67.8 | 67.8-106 | 2011 |
| CALCIUM | ppm | 16.3 | 11.4-16.3 | 2011 |
| CHLORIDE | ppm | 21.5 | 21.5-24.5 | 2011 |
| HARDNESS, TOTAL (AS CACO3) | ppm | 111 | 98.1-130 | 2011 |
| IRON, DISSOLVED | ppb | 31.4 | 10.0-34.1 | 2011 |
| MAGNESIUM | ppm | | 16-17.1 | 2011 |
| MANGANESE | ppb | | 1.06-4.6 | 2011 |
| PH | ppm | 8.2 | 7.99-8.45 | 2011 |
| POTASSIUM | ppm | 6.28 | 5.67-6.53 | 2011 |
| SODIUM | ppm | 38.0 | 33.4-39.1 | 2011 |
| SOLIDS, TOTAL DISSOLVED (TDS) | ppm | 263 | 227-263 | 2011 |
| SULFATE | ppm | 100 | 64.7-100 | 2011 |

| VOLATILE ORGANIC | UNITS | LEVEL FOUND | RANGE OF DETECTIONS | SAMPLE YEAR |
|---|---|---|---|---|
| BROMOCHLOROACETIC ACID | ppb | 1.700 | 1.70-4.78 | 2010 |
| BROMODICHLOROMETHANE | ppb | 0.5200 | 0.52-6.62 | 2010 |
| BROMOFORM | ppb | <0.5 | <0.5-1.29 | 2011 |
| BROMODICHLOROMETHANE | ppb | 0.52 | 0.52 | 2010 |
| CHLOROFORM | ppb | 1.52 | 0.89-7.3 | 2011 |
| DIBROMOACETIC ACID | ppb | <0.6 | <0.6-2.81 | 2011 |
| DICHLOROACETIC ACID | ppb | 5.2600 | <4-5.86 | 2010 |

# *Annual Drinking Water Quality Report*

**Public Water Supply District No. 13**
**of Jackson County, Missouri**
99 Lake Lotawana Road
Lake Lotawana, MO 64086

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