CITY OF OAKDALE

2016 DRINKING WATER REPORT

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CONSUMER CONFIDENCE REPORT

PWSID: 1820016

City of Oakdale

2016 Drinking Water Report

The City of Oakdale is issuing the results of monitoring done on its drinking water for the period from January 1 to December 31, 2016. The purpose of this report is to advance consumers' understanding of drinking water and heighten awareness of the need to protect precious water resources.

Source of Water

The City of Oakdale provides drinking water to its residents from a groundwater source: eight wells ranging from 501 to 581 feet deep, that draw water from the Jordan aquifer.

The Minnesota Department of Health has made a determination as to how vulnerable our systems' source(s) of water may be to future contamination incidents. If you wish to obtain the entire source water assessment regarding your drinking water, please call 651-201-4700 or 1-800-818-9318 (and press 5) during normal business hours. Also, you can view it on line at www.health.state.mn.us/divs/eh/water/swp/swa.

Call 651-730-2740 if you have questions about the City of Oakdale drinking water or would like information about opportunities for public participation in decisions that may affect the quality of the water.

Results of Monitoring

No contaminants were detected at levels that violated federal drinking water standards. However, some contaminants were detected in trace amounts that were below legal limits. The table that follows shows the contaminants that were detected in trace amounts last year.

Key to abbreviations:

MCLG—Maximum Contaminant Level Goal: 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.

MCL—Maximum Contaminant Level: 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.

MRDL—Maximum Residual Disinfectant Level.

MRDLG—Maximum Residual Disinfectant Level Goal.

AL—Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirement which a water system must follow.

90th Percentile Level—This is the value obtained after disregarding 10 percent of the samples taken that had the highest levels. (For example, in a situation in which 10 samples were taken, the 90th percentile level is determined by disregarding the highest result, which represents 10 percent of the samples.) Note: In situations in which only 5 samples are taken, the average of the two with the highest levels is taken to determine the 90th percentile level.

pCi/1-PicoCuries per liter (a measure of radioactivity).

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ppm─Parts per million, which can also be expressed as milligrams per liter (mg/l).

ppb─Parts per billion, which can also be expressed as micrograms per liter (µg/l).

nd─No Detection.

N/A─Not Applicable (does not apply).

Contaminant (units)	MCLG	MCL	Level Found		Typical Source of Contaminant
			Range (2016)	Average /Result*	
Alpha Emitters (pCi/l)	0	15.4	N/A	3.5	Erosion of natural deposits.
Arsenic (ppb)	0	10	nd-1.14	1.14	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium (ppm)	2	2	nd-.0686	.07	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride (ppm)	4	4	.86-1.1	1.15	State of Minnesota requires all municipal water systems to add fluoride to the drinking water to promote strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories.
Haloacetic Acids (HAA5) (ppb)	0	60	nd-3.4	3.4	By-product of drinking water disinfection.
Nitrate (as Nitrogen) (ppm)	10.4	10.4	nd-2.3	2.3	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
TTHM (Total trihalomethanes) (ppb)	0	80	4.1-10.5	10.5	By-product of drinking water disinfection.

*This is the value used to determine compliance with federal standards. It sometimes is the highest value detected and sometimes is an average of all the detected values. If it is an average, it may contain sampling results from the previous year.

Contaminant (units)	MRDLG	MRDL	****	*****	Typical Source of Contaminant
Chlorine (ppm)	4	4	.1-.2	.21	Water additive used to control microbes.

****Highest and Lowest Monthly Average.
*****Highest Quarterly Average.

Contaminant (units)	MCLG	AL	90% Level	# sites over AL	Typical Source of Contaminant

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Contaminant (units)	MCLG	AL	90% Level	# sites over AL	Typical Source of Contaminant
Copper (ppm)	1.3	1.3	.12	0 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits.
Lead (ppb)	0	15	4.3	0 out of 30	Corrosion of household plumbing systems; Erosion of natural deposits.

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. City of Oakdale 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.

Monitoring may have been done for additional contaminants that do not have MCLs established for them and are not required to be monitored under the Safe Drinking Water Act. Results may be available by calling 651-201-4700 or 1-800-818-9318 during normal business hours.

Compliance with National Primary Drinking Water Regulations

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 from human activity.

Contaminants that may be present in 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, oil and gas production, mining, or 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 petroleum production, 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 mining activities.

In order to ensure that tap water is safe to drink, the U. S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must 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 can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

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 at 1-800-426-4791.

PFC Factsheet

What are Perfluorochemicals (PFCs)?
PFCs were made by the 3M Company in Cottage Grove and in other areas of the world. These chemicals were used in household and industrial products such as stain repellents, lubricants, fire retardants, fire suppressants and pesticides. Two of the most common uses of PFCs found in the home are the products Teflon and Scotchguard. Three types of PFCs have contaminated east metro water systems, as well as Lake Calhoun and other metro area lakes. They are perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA) and perfluorobutanoic acid (PFBA).

Why are there concerns about PFCs?
While the level of water contamination is considered "low," there is concern about whether any level of exposure to PFCs is safe. A U.S. EPA Science Advisory Board (SAB) animal study found health effects at even the lowest PFOA blood levels. The SAB also classified PFOA as a likely human carcinogen. As a result of environmental and health concerns, 3M stopped production of Scotchguard in 2000 and ceased PFOA production at its Cottage Grove Plant. In high dose animal studies, PFOS and PFOA cause cancer, physical development delays, endocrine disruption and neonatal mortality. Much less is known about health effects from PFBA because it has not been studied extensively.

What is causing the contamination?
The suspected sources of contamination are 3M's production plant in Cottage Grove and landfills where 3M disposed of PFCs. However, the discovery of dangerously high levels of PFCs in bluegill fish in Lake Calhoun raises questions as to how the pollution became so widespread.

Who is affected by this problem?
Approximately 67,700 residents served by city water in Cottage Grove, St. Paul Park, Oakdale and private wells in Lake Elmo are affected by the pollution. Additionally, anyone who eats fish from of the Chain of Lakes in Minneapolis or from the Mississippi River risks exposure to PFC contamination. A 3M chemical also has been detected in Woodbury, Newport, Hastings and South St. Paul. Three landfills in St. Paul, Inver Grove Heights and Rosemont also have high PFC concentrations. The effects on groundwater near these sites will be clarified through further testing.

What should I do to avoid health risks?
Water filters containing Granular Activated Carbon (GAC) remove some PFCs. Many common water filters use GAC. You should be sure that these filters are properly installed and maintained. Bottled water has not been widely tested for PFCs and boiling water will not remove PFCs. Visit the Minnesota Department of Health web site to view their report on which filtration systems are most effective for PFC removal.

What is being done about the contamination?
New PFC drinking water standards were mandated by the Minnesota Legislature and set by the Minnesota Department of Health. The current standards are .5 ppb for PFOA, .3 ppb for PFOS and 7ppb for PFBA. This is the amount of PFC considered safe to consume in drinking water. The Minnesota Pollution Control Agency (MPCA) reached an agreement with 3M that provides $8 million to clean up PFCs in the Washington County Landfill, provides $5 million to MPCA for research on PFCs in the environment, provides alternate drinking water where PFCs exceed state HRLs and removes PFC waste from three former disposal sites to store in a lined facility or incinerate.

Is Minnesota the only state with PFC contamination?
No, seven other states -- New Jersey, Virginia, West Virginia, Ohio, Alabama, North Carolina and New York- have experienced PFC water contamination. In New Jersey, Virginia, West Virginia and North Carolina the contamination is from four DuPont plants that manufacture or continue to use PFOA. A 3M plant in Decatur is associated with the contamination in Alabama.

How have other contaminated communities responded?
Some community residents have filed class action lawsuits against DuPont and 3M. In Ohio and West Virginia, residents reached an out of court settlement that provides treatment systems for all affected public water supplies, installs carbon filtration systems on private wells and conducts community health evaluations to determine if there is a link between PFC exposure and disease. The data from the community health evaluations will be reviewed by an independent panel of experts. If the expert panel determines there is a link between PFC exposure and disease, a medical monitoring program will be established. In New Jersey and Virginia, environmental groups and unions are working together to fight for safe drinking water, contamination clean up, medical monitoring and the quick phase out of PFOA production. In early 2007, the New Jersey Department of Environmental Protection set the drinking water guidance level for PFOA at .04 ppb, making it the lowest in the nation. This is more than ten times lower - thus more protective - than the current Minnesota standard.

Water Filtration Plant
On October 30, 2006, the city began operating a new filtration plant designed to remove PFCs from water coming from city wells #5 and #9. Well #9 is the city's newest and largest capacity well. The design and construction of the plant was financed by the 3M Company. The plant is operated by city staff with the ongoing costs paid by 3M.

Oakdale Water Filtration Plant
The plant uses large granular activated carbon (GAC) filters to remove PFCs from the water. Testing by the Minnesota Department of Health showed that GAC filters remove most PFCs from the water. The special material in the filters is made from raw materials (such as coconut shells) that are high in carbon. Heat is used to increase (activate) the surface area of the carbon, allowing it to trap organic chemicals as the water passes over it. Eventually the ability of the carbon to trap chemicals is used up and the carbon must be replaced. Periodic testing of the wells and filters tells the operators when it is necessary to change the carbon.