2016 WATER QUALITY REPORT FOR WAPELLO RURAL WATER ASSOC.

This report contains important information regarding the water quality in our water system. The source of our water is groundwater and surface water. Our groundwater is drawn from the alluvial aquifer(s). Some of our water is purchased. Purchased water comes from Ottumwa Water Works, Brighton Municipal Water Supply and Rathbun Regional Water (Mt. Pleasant).

Our water quality testing shows the following results:

DISTRIBUTION SYSTEM 950 – GROUND WATER SYSTEMS

CONTAMINANT	MCLG	MCL	TYPE	VALUE (RANGE)	DATE SAMPLED	VIOLATION	SOURCE
Lead (ppb)	0	AL=15	90th percentile	1.00 (ND-2)	2016	NO	Corrosion of household plumbing systems; erosion of natural deposits
Chlorine (ppm)	MRDLG =4.0	MRDL=4.0	RAA	1.4 (.62-2.7)	03/31/2016	NO	Water additive used to control microbes
Copper (ppm)	1.3	AL=1.3	90th percentile	.0179 (ND-.0378)	2016	NO	Corrosion of household plumbing systems; Erosion of natural deposits
TTHM (ppb) [Total trihalomethanes]	N/A	80	SGL	67.00	10/24/2016	NO	By-products of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	N/A	60	SGL	11.00	10/24/2016	NO	By-products of drinking water disinfection

DISTRIBUTION SYSTEM 951 – SURFACE WATER SYSTEMS

CONTAMINANT	MCLG	MCL	TYPE	VALUE (RANGE)	DATE SAMPLED	VIOLATION	SOURCE
Chlorine (ppm)	MRDLG =4.0	MRDL=4.0	RAA	2.5 (1.7-3.3)	12/31/2016	NO	Water additive used to control microbes
TTHM (ppb) [Total trihalomethanes]	N/A	80	SGL	74.00	10/25/2016	NO	By-products of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	N/A	60	SGL	36.00	10/25/2016	NO	By-products of drinking water disinfection
Lead (ppb)	0	AL=15	90th percentile	1.00 (ND-2)	2016	NO	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	1.3	AL=1.3	90th percentile	.0179 (ND-.0378)	2016	NO	Corrosion of household plumbing systems; Erosion of natural deposits

SOURCE ENTRY POINT 02 FROM OTTUMWA

CONTAMINANT	MCLG	MCL	TYPE	VALUE (RANGE)	DATE SAMPLED	VIOLATION	SOURCE
Barium (ppm)	2	2	SGL	.0804	01/24/2012	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	RAA	.54 (.400-.700)	03/31/2016	NO	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories

Nitrate [as N] (ppm)	10	10	SGL	9.300 (6.90-9.30)	2016	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)	N/A	N/A	SGL	10.9	01/12/2016	NO	Erosion of natural deposits; Added to water during treatment process
Atrazine (ppb)	3	3	RAA	.93	2014	NO	Runoff from herbicide used on row crops
Total Organic Carbon (TOC) (ppm)	N/A	N/A	TT	2.12-2.9	2016	NO	Naturally present in the environment
Turbidity (NTU)	N/A	N/A	TT	.02-.224	2016	NO	Soil runoff
Arsenic (ppb)	10	0	SGL	4.00	01/24/2012	NO	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronic production wastes

SOURCE ENTRY POINT 03 FROM BRIGHTON

CONTAMINANT	MCLG	MCL	TYPE	VALUE (RANGE)	DATE SAMPLED	VIOLATION	SOURCE
Alpha emitters (pCi/L)	0	15	SGL	9.6	3/24/2015	NO	Erosion of natural deposits
Sodium (ppm)	N/A	N/A	SGL	321	12/13/2016	NO	Erosion of natural deposits; Added to water during treatment process
Combined radium (pCi/L)	0	5	SGL	2.9	3/24/2015	NO	Erosion of natural deposits

SOURCE ENTRY POINT 04 FROM RATHBUN (MT PLEASANT WATER SYSTEM)

CONTAMINANT	MCLG	MCL	TYPE	VALUE (RANGE)	DATE SAMPLED	VIOLATION	SOURCE
Alpha emitters (pCi/L)	0	15	SGL	5	04/13/2015	NO	Erosion of natural deposits
Combined radium (pCi/L)	0	5	SGL	1.4	04/13/2015	NO	Erosion of natural deposits
Fluoride (ppm)	4	4	RAA	1.44 (.32-1.44)	2016	NO	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Sodium (ppm)	N/A	N/A	SGL	130	05/03/2016	NO	Erosion of natural deposits; Added to water during treatment process

SOURCE ENTRY POINT 05 FROM DELTA PLANT

CONTAMINANT	MCLG	MCL	TYPE	VALUE (RANGE)	DATE SAMPLED	VIOLATION	SOURCE
Combined radium (pCi/L)	0	5	SGL	1.0	10/2012	NO	Erosion of natural deposits
Fluoride (ppm)	4	4	RAA	.78-.40	2016	NO	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Sodium (ppm)	N/A	N/A	SGL	12	10/17/2016	NO	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10	10	SGL	0-.1	10/10/2016	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

UNREGULATED CONTAMINANTS MONITORING – SURFACE WATER

CONTAMINANT	MCLG	MCL	HIGHEST DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION UG/L	VIOLATION	SOURCE
Hexavalent Chromium	N/A	N/A	.423	2013	.31 - .423	NO	EPA Study Participant
Chromium	N/A	N/A	1.4	2013	.30 – 1.4	NO	EPA Study Participant
Vanadium	N/A	N/A	2.10	2013	1.4 – 2.10	NO	EPA Study Participant
Molybdenum	N/A	N/A	5	2013	2.40 - 5	NO	EPA Study Participant
Strontium	N/A	N/A	332	2013	135 - 332	NO	EPA Study Participant

UNREGULATED CONTAMINANTS MONITORING – GROUND WATER

CONTAMINANT	MCLG	MCL	HIGHEST DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION UG/L	VIOLATION	SOURCE
Chlorate	N/A	N/A	5.28	2013	3.50 – 5.28	NO	EPA Study Participant
Chromium	N/A	N/A	1.20	2013	.3 – 1.20	NO	EPA Study Participant
Hexavalent Chromium	N/A	N/A	1.5	2013	.975 – 1.5	NO	EPA Study Participant
Strontium	N/A	N/A	689	2013	73 - 689	NO	EPA Study Participant

UNREGULATED CONTAMINANTS MONITORING – DELTA PLANT

CONTAMINANT	MCLG	MCL	HIGHEST DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION UG/L	VIOLATION	SOURCE
Hexavalent Chromium	N/A	N/A	1.50	2013	.975 – 1.50	NO	EPA Study Participant
Chromium	N/A	N/A	1.6	2013	1.4 – 1.6	NO	EPA Study Participant
Vanadium	N/A	N/A	1.7	2013	1.0-1.7	NO	EPA Study Participant
Strontium	N/A	N/A	57	2013	56 - 57	NO	EPA Study Participant

UNREGULATED CONTAMINANTS MONITORING – RATHBUN (MT PLEASANT WATER SYSTEM)

CONTAMINANT	MCLG	MCL	HIGHEST DETECTED LEVEL	DATE SAMPLED	RANGE OF DETECTION UG/L	VIOLATION	SOURCE
Chromium	N/A	N/A	.8	2013	.8	NO	EPA Study Participant
Chlorate	N/A	N/A	639	2013	440 - 639	NO	EPA Study Participant
Strontium	N/A	N/A	757	2013	646 - 757	NO	EPA Study Participant

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

DEFINITIONS

- 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.
- ppb -- parts per billion.
- ppm -- parts per million.
- pCi/L – picocuries per liter
- N/A – Not applicable
- ND -- Not detected
- RAA – Running Annual Average
- IDSE – Initial Distribution System Evaluation
- Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.
- Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- 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.

- 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.

GENERAL INFORMATION

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 posed a health risk. More information about contaminants or potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (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 (800-426-4791).

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. Wapello Rural Water Assoc. 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.

ADDITIONAL HEALTH INFORMATION

Lead.-Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or, high blood pressure.

Nitrite- Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.

SOURCE WATER ASSESSMENT INFORMATION

This report contains information regarding the water quality in our water system. Wapello Rural Water obtains most of its ground water from the alluvial aquifer located near the South Skunk River south of Delta, Iowa. The Iowa Department of Natural Resources Geological Survey Bureau has determined the aquifer to be highly susceptible to contamination because of the characteristics of the aquifer and the overlying material allows the easy access of contamination to the aquifer. Wapello Rural Water wells will be susceptible to most containment sources through pathways to the aquifer such as abandoned or poorly maintained wells. Ground water is also purchased from Mt. Pleasant and Brighton. Mt. Pleasant and Brighton draw from the Cambrian-Ordovician aquifer and was determined not to be susceptible to contamination because of the characteristics of the aquifer overlying materials prevent easy access of contamination to the aquifer.

Our Surface water is purchased from Ottumwa Water Hydro and drawn from the Des Moines River. A source water assessment for the Des Moines River has been completed by the Iowa Department of Natural Resources. They found easy access to contamination source to include but not limited to: soil erosion, chemicals such as fertilizer and pesticides, animal agriculture, waste water facilities, septic systems and petroleum products.
Water source assessments can be seen at the Office of Wapello Rural Water in Ottumwa during regular business hours.

OTHER INFORMATION - No Other Information

CONTACT INFORMATION

For questions regarding this information, please contact Dan Westegard at (641) 682-8351 during the following hours: 7:00 am to 3:30 pm Monday – Friday.

Decisions regarding the water system are made at the Wapello Rural Water Assoc. Board meetings held on second Wednesday of each month at 7:30 p.m. at 534 Shaul Ave Ottumwa, IA and are open to the public. ***This institution is an equal opportunity provider and employer.***