Annual Drinking Water Quality Report

HAMPTON IL1610300

Annual Water Quality Report for the period of January 1 to December 31, 2017

This report is intended to provide you with important information about your drinking water and the efforts made by the Hampton water system to provide safe drinking water. The source of drinking water used by Hampton is purchased water from the City of East Moline.

For more information regarding this report contact: Michelle Bergeson, Village Clerk 309-755-7165 or email: mbergeson@hamptonil.org

We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our scheduled meetings. The Village Board meets on the second and fourth Monday of the month at 7:00 PM at the Village Hall, 520 First Avenue.

Source of Drinking 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.

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 storm water 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 storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

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 EPA's Safe Drinking Water Hotline at (800) 426-4791.

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

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).

Lead In Drinking Water

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. The Village of Hampton is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. If 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 your drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800) 426-4791 or at www.epa.gov/safewater/lead.

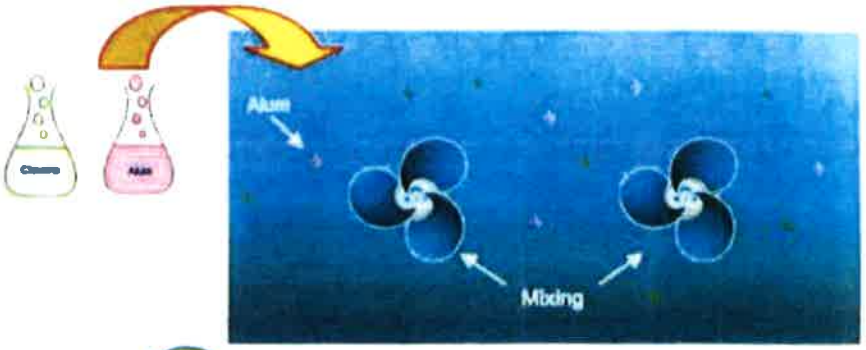
Source Water Assessment

A Source Water Assessment Plan (SWAP) is now available at the East Moline Water Treatment Plant office. This plan is an assessment of the delineated area around our listed sources through which contaminates, if present, could migrate and reach our source water. It includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources. According to the SWAP, East Moline had a susceptibility rating of medium. If you would like to review the SWAP, you may access the assessment from the Illinois EPA website at http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl.

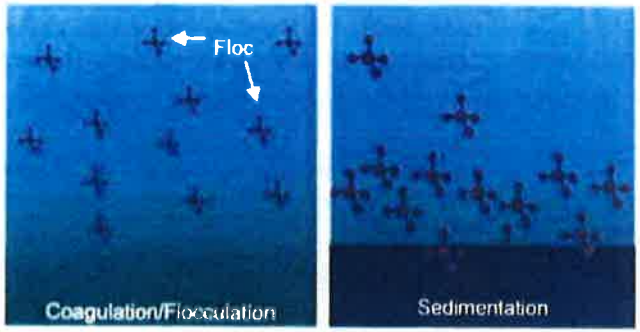
EAST MOLINE ' S WATER TREATMENT PROCESS

1 Raw surface water is taken in from the Mississippi River via an intake pipe and flows to the intake building.

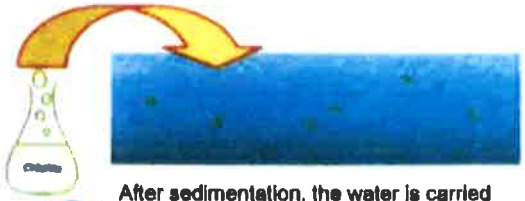
2 Here the water flows through a large mesh screen to remove debris, and a chemical called Carbon is added to remove unwanted tastes and odors from the water. The water is then pumped to the water plant for further treatment.



3 At the water plant the water is treated with a chemical called Aluminum sulfate (alum). Alum is used in a process called coagulation, which helps dirt, bacteria, algae, and other particles bind together and form larger particles called floc. These chemicals are added to the water and mixed using large propeller mixers.

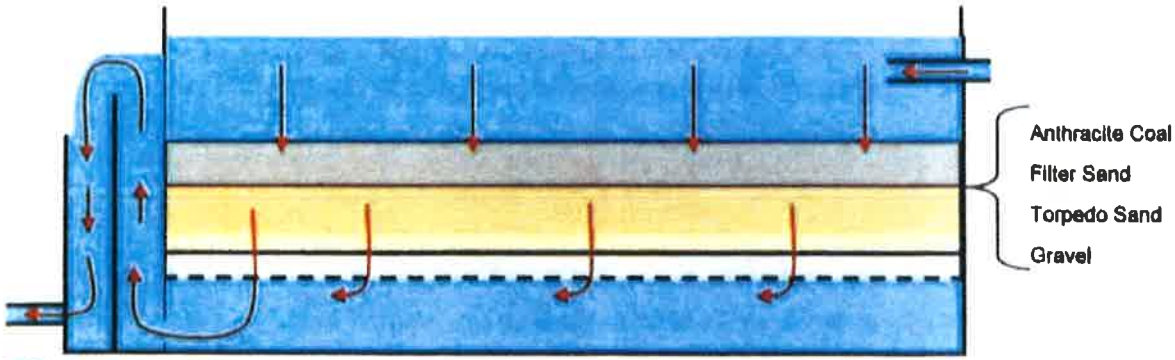


4 During the coagulation/flocculation stage of treatment the water goes through a series of basins that mix progressively slower and allow floc to become heavy enough that it will drop to the bottom of the sedimentation basin. The floc is then removed from the bottom of the sedimentation basin using a large sweep.

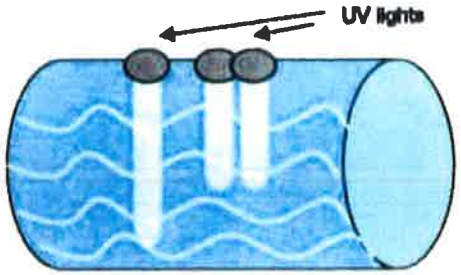


5 After sedimentation, the water is carried through a settled water channel to the filters. Chlorine is added in the settled water channel to disinfect the water.

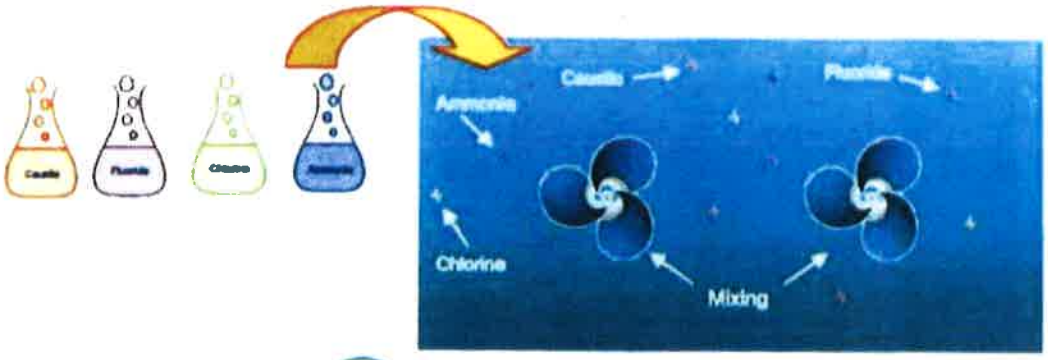
EAST MOLINE ' S WATER TREATMENT PROCESS



6 Any particles remaining in the water after coagulation and sedimentation are removed by passing the water through filters made from crushed coal (anthracite), sand, and gravel. The filters catch the small particles and do not allow them to pass through the filter.



7 Some organisms in the water, such as Giardia and Cryptosporidium, are resistant to disinfection treatment and therefore must be inactivated. We treat the water with ultraviolet (UV) radiation to inactivate these organisms.



8 After UV inactivation, the water is treated with a combination of chlorine and ammonia to form a product called chloramine. Chloramines further disinfect the water while hindering the formation of unwanted trihalomethanes (THMs). In addition, Fluoride is added to the water to help protect our teeth from decay, and Caustic is added to help stabilize the pH of the water.

9 Finally, based on consumer demands, finished water is pumped from the clearwell storage tank at the water plant to the cities ' four water towers for additional storage. The water then flows through underground water mains and water service lines to homes and businesses throughout the city.

Table 1: Substances Regulated by the USEPA

Substance we test for...	Unit the substance is measured in ...	Year we sampled...	MCL or MRDL	MCLG or MRDLG	Amount we detected...	Range detected	Violation	Likely Source of contamination...
Combined Radium 226/228	pCi/L	2015	5	0	1.52	1.52-1.52	No	Erosion of naturally occurring deposits
Gross Alpha excluding Radon & Uranium	pCi/L	2015	15	0	0.552	0.552-0.552	No	Erosion of naturally occurring deposits
Barium	ppm	2017	2	2	0.042	0.042-0.042	No	Discharge of drilling wastes Discharge from metal refineries Erosion of naturally occurring deposits
Fluoride	ppm	2017	4	4	0.714	0.714-0.714	No	Discharge from fertilizer and aluminum factories Erosion of naturally occurring deposits Water additive that promotes strong teeth
Nitrate	ppm	2017	10	10	2.7	2.7-2.7	No	Erosion of naturally occurring deposits Leaching from septic tanks and sewage Runoff from fertilizer use
Selenium	ppb	2017	50	50	2.2	2.2-2.2	No	Discharge from petroleum and metal refineries Erosion of naturally occurring deposits Discharge from mines
Turbidity[1]	NTU	2017	1	NA	0.22	0.08-0.22	No	Soil runoff
Turbidity	Lowest monthly % of samples meeting limit	2017	0.3 NTU	NA	100%	100%	No	Soil runoff

[1]Turbidity is a measure of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of the filtration
system and disinfectants.

Table 2: Substances Regulated by the IEPA

Substance we tested for...		Violation	Likely source of contamination...
Total Organic Carbon	The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violation section.	No	Naturally present in the environment

Table 3: Substances Regulated by the IEPA

Substance we test for...	Unit the substance is measured in ...	Year we sampled...	MCL or MRDL	MCLG or MRDLG	Amount we detected...	Range detected	Violation	Likely Source of contamination...
Iron[2]	ppm	2017	1.0	NA	0.017	<0.010-0.017	No	Erosion of naturally occurring deposits.
Manganese[2]	ppb	2017	150	150	3.0	0.0039-3.0	No	Erosion of naturally occurring deposits
Sodium[2]	ppm	2017	NA	NA	24	24-24	No	Erosion of naturally occurring deposits Used in water softener regeneration

[2]Iron, manganese and sodium are not currently regulated by the USEPA. However, the state has set an MCL for these contaminants for supplies serving a population of 1,000 or more.

Table 4: Cryptosporidium samples were collected from our source water[3]

Substance we test for...	Unit the substance is measured in ...	Year we sampled...	MCL or MRDL	MCLG or MRDLG	Amount we detected...	Range detected	Violation	Likely Source of contamination...
Cryptosporidium	Oocysts per liter	2017	TT	0	<0.350	<0.100-<0.350	No	Naturally present in the environment

[4]Our source water is the Mississippi River

Table 5: Unregulated Contaminant Monitoring Rule (UCMR3) Substances[4]

Substance we test for...	Unit the substance is measured in ...	Year we sampled...	MCL or MRDL	MCLG or MRDLG	Amount we detected...	Range detected	Violation	Likely Source of contamination...
1,4-Dioxane:								Cyclic Aliphatic Ether- which is used as a solvent or solvent stabilizer in manufacturing and processing of paper, cotton, textile products, automotive coolant, cosmetics, shampoos, cleaning agents, surface coating, and adhesive agents
Entry Point	ppb	2013	NA	NA	0.31	0.00-0.56	NA	
Chlorate:								
Entry Point	ppb	2013	NA	NA	174	46-310	NA	Erosion of naturally occurring deposits
Distribution	ppb	2013	NA	NA	191	46-340	NA	Used in water softener regeneration
Chromium 6:								Naturally occurring element Used in making steel and other alloys
Entry Point	ppb	2013	NA	NA	0.05	0.00-0.07	NA	Used for chrome plating, dyes, pigments,
Distribution	ppb	2013	NA	NA	0.06	0.03-0.09	NA	leather tanning, and wood preservation
Molybdenum:								Commonly used from molybdenum trioxide used as a chemical reagent
Entry Point	ppb	2013	NA	NA	0.06	0.00-1.3	NA	Naturally occurring element found in ores,
Distribution	ppb	2013	NA	NA	0.06	0.00-1.3	NA	plants, animals, and bacteria
Strontium:								Naturally occurring element Commercially found in the faceplate glass
Entry Point	ppb	2013	NA	NA	96	86-110	NA	of cathode-ray televisions to block x-ray
Distribution	ppb	2013	NA	NA	92	87-110	NA	emissions
Vanadium:								Naturally occurring elemental metal
Entry Point	ppb	2013	NA	NA	0.96	0.29-1.60	NA	Used in the form of vanadium pentoxide
Distribution	ppb	2013	NA	NA	0.98	0.43-1.50	NA	as a chemical intermediate and catalyst

HAMPTON RESULTS
2017 Regulated Contaminants Detected

Lead and Copper

Definitions:
Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.
Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	06/09/2015	1.3	1.3	0.068	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	06/09/2015	0	15	1.6	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Regulated Contaminants

Disinfectants and Disinfection By- Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	12/31/2017	3.1	2.8 - 3.4	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2017	23	18.1 - 29.5	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2017	39	21.4 - 33.4	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.
Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the Maximum Contaminant Level Goal 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. MCLG's allow for a margin of safety.
Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants
Maximum Residual Disinfectant Level Goal (MRDLG): The level of disinfectant in drinking water below which there is no known or expected risk to health. MRDLG's allow for a margin of safety.
NA: not applicable.
NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity is excess of 5 NTU is just noticeable to the average person.
ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).
ppm (parts per million): One part substance per million parts water (or milligrams per liter).
removal ratio: A ratio between the percentage of substances actually removed to the percentage of the substance required to be removed.
TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.