



VILLAGE OF WESTERN SPRINGS

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VILLAGE OF WESTERN SPRINGS ANNUAL WATER QUALITY REPORT

Water testing performed in 2010

Water Treatment Chemicals

Water treatment chemicals used by the Water Treatment Plant have remained the same over the years, except for the use of Soda Ash. Soda Ash was discontinued after the plant expansion in 1985. Presently, the chemicals used by the plant are lime, alum, carbon dioxide, and chlorine.

Lime is added, primarily, to soften the water. In doing so, calcium carbonate and, to a lesser extent, magnesium hydroxide are precipitated out of the water. Softening at the water plant typically lowers the water hardness to around seven grains per gallon. During the course of the year, hardness levels in the water may fluctuate between six and eight grains per gallon depending on plant operation.

Alum or aluminum sulfate is added to the water to help "neutralize" charged particles in the water that

occur during the softening operation. Allowing these colloids to come together and "stick" to one another helps form larger particles or floc. As the floc grows, it removes most of the turbidity associated with the lime softening.

Carbon dioxide is added to lower the PH of the water after softening. By lowering the PH of the water to an acceptable level, the amount of calcium carbonate deposition or dissolution can be affected. Recarbonation attempts to "stabilize" the water so as to protect the water mains without causing major restrictions over time.

Chlorine is mainly added to the water for the purpose of disinfection. The chlorine reacts with natural ammonia in the water to form chloramines. Given sufficient concentration and

time, chloramines inactivate pathogenic bacteria that may find their way into the distribution system. By taking chlorine residuals, the amount of this disinfecting agent is determined. Finished water leaving the plant carries a chlorine residual of approximately two parts per million (ppm). As the water travels through the distribution system the residual dissipates and at the furthest end of the system it drops to approximately one ppm.

Any questions may be directed to Ken Hayes, Water Plant Operator, at 708-246-1800, Ext. 215 or khayes@wsprings.com.



Water Bill Payment Made Easy

Automatic payment of your water bill is available to all residents. Your payment is electronically withdrawn from the account of your choice on the due date of your water bill.

Interested? The application is available at www.wsprings.com or the Village Hall.

For more information, please contact the Finance Department at 708-246-1800, Ext. 126.

Continuing Our Commitment

Once again the Village of Western Springs proudly presents the annual water quality report. This report covers all testing completed as of December 2010 and is designed to inform you about the quality of the drinking water. The report includes details about where your water comes from, what it contains and how it compares to standards set by state and federal regulatory agencies.

We are pleased to tell you that our compliance with all state and federal drinking

water laws remains exemplary. As in the past, we are committed to delivering the best quality drinking water.

In the Village of Western Springs, the governing body overseeing the water system is the Village Board. The Board meets on the second and fourth Mondays of each month. There is also an advisory group of citizens, the Infrastructure Commission, who meet on an as-needed basis.

For more information about this report, or for

any questions relating to your drinking water, please contact Ken Hayes, Water Plant Operator, at 708-246-1800, Ext. 215 or khayes@wsprings.com.



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Reverse Osmosis Water Plant Update

In 2008, after years of study and analysis, the Village selected reverse osmosis (RO) as the preferred method of treating the water supply in the future. The Village will continue to use the deep aquifers, but will transform the current lime softening water treatment plant into a reverse osmosis plant.

In the fall of 2010, the Village awarded a contract to Joseph J. Henderson for the construction of the new water treatment plant. To pay for the project, the Village has been awarded a low interest loan of 1.25% from the Illinois Environmental Protection Agency in the amount of \$8,030,530. Construction will begin

this fall and the reverse osmosis plant is expected to be operational in the fall of 2012.

Questions regarding the project, may be directed to Matthew Supert, Acting Director of Municipal Services at 708-246-1800, Ext. 276 or msupert@wsprings.com.

What's In My Water?

We are pleased to report that during the past year, the water delivered to your home or business complied with, or did better than, all state and federal drinking water requirements. For your information, we have

compiled the table below to show what substances were detected in our water as of December 31, 2010. Please note that the contaminants in this table do not necessarily represent water found in distribution. Water

quality can and does vary during the course of the year due to operational considerations and seasonal demands. Flouride occurs naturally in the well water and is not added.

Water Quality Test Results*

Regulated Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Unit of Measurement	MCLG Drinking	MCL Drinking	Violation Drinking	Likely Source of Contamination
Disinfectants								
Chlorine	Bi-weekly	1.53	.89-1.53	ppm	MRDLG=4	MRDL=4	No	Water additive used to control microbes
Inorganic								
Arsenic	10/09/2009	5.36	5.36	ppb	0	10	No	Erosion of natural deposits
Barium	10/09/2009	.0347	.0347	ppm	2	2	No	Erosion of natural deposits
Fluoride	10/09/2009	.18	.18	ppm	4	4	No	Erosion of natural deposits;
Iron	10/09/2009	2.66	2.66	ppm		1.0	No	Erosion of natural deposits
Manganese	10/09/2009	.174	.174	ppm	.150	.150	No	Erosion of natural deposits
Nitrate	7/06/2009	.14	.14	ppm	10	10	No	Runoff from fertilizer use
Sodium	10/09/2009	117	117	ppm			No	Erosion of natural deposits
Radioactive								
Alpha Emitters	01/26/2009	7.1	7.1	pCi/L	0	15	No	Erosion of natural deposits
Combined Radium	01/26/2009	2.5	2.5	pCi/L	0	5	No	Erosion of natural deposits
Uranium	01/26/2009	.0894	.0894	ug/L	0	30	No	Erosion of natural deposits

*Data presented in the table may show either raw water or distribution water depending on which samples were required to be collected in a given year.

Table Definitions

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.

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.

MRDL (Maximum Residual Disinfectant Level) The highest level of disinfectant allowed in drinking water.

MRDLG (Maximum Residual Disinfectant Level Goal)

The level of disinfectant in drinking water below which there is no known or expected risk to health.

pCi/L (picocuries per liter) A measure of radioactivity.

ppb (parts per billion) One part substance per billion parts water.

ppm (parts per million) One part substance per million parts water.

ugL (ppb) Micrograms per liter.

Where Does My Water Come From?

Since the development of the Western Springs' water system in 1882, the Village has obtained its water from ground water sources. During the early years these included springs from which the community derives its name. In subsequent years, the Village became dependent upon well water and, since the late 1950's, the primary water source has been deep wells.

At the present time, the Village has three wells, two deep and one shallow. Of the two deep wells, one draws water from the Galesville aquifer and the other draws

water from both Galesville and Mt. Simon aquifers. These aquifers are underground rivers passing through sandstone formations, thousands of feet below the surface, which extend north into Wisconsin. The shallow well draws water from the Niagaran aquifer, an underground river that passes through a limestone formation.

The water from each well has its own unique chemistry. The Village's water treatment plant uses conventional treatment practices (softening, coagulation, sedimentation, filtration, and chlorination)

to protect the water from harmful contaminants. These aquifers also contain certain minerals, which contribute to the hardness of the water. While hardness does not pose a health problem, if left untreated, it requires the use of more soap for washing dishes, clothes, and bathing. Excessive hardness can shorten the life of appliances such as water heaters and create unsightly water spots on glassware. In order to reduce hardness, the treatment plant adds lime to the water. In this way, the water is softened to an acceptable level.

Contaminants That Might Be Found in Drinking Water

Possible 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, 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;

Pesticides and herbicides, may come from a variety of sources such as urban storm water 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 storm water runoff and septic systems;

Radioactive contaminants, which may be naturally occurring or be the result of oil and gas production.

Drinking water, including bottled water, may reasonably be expected to contain 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 **USEPA's Safe Drinking Water Hotline (800-426-4791)**. In order to ensure that tap water is safe to drink, USEPA prescribes regulations, which limit the amount of certain substances in the water provided by the public water system. Federal Drug Administration 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. Immunocompromised 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.

If present, elevated levels of lead can cause serious health problems. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We 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 www.epa.gov.



2010 Source Water Assessment Summary

The Source Water Assessment has been completed and the Illinois EPA has determined that "Western Springs' wells #3 and #4 source water is not susceptible to contamination. This determination is based on a number of criteria including: monitoring conducted at the wells, monitoring conducted at the entry point to the distribution system, and the available hydro-geological data on the well."

To view a summary version of the completed Source Water Assessment, including: Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts, you may access the Illinois EPA web site at www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl.