2002 Annual Drinking Water Quality Report
Village of Oostburg

Our Mission

The Oostburg Municipal Water Department strives to provide safe and sufficient water to enhance and sustain our vibrant community. Our goal is to furnish you with the best possible water at the lowest possible price. We continually surpass all state and federal health and safety standards while providing water at a cost of less than a quarter of a penny per gallon.

The 2002 Water Quality Report

As a service to our customers, we are pleased to provide you with this annual water quality report for 2002. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually protect our water resources. We are committed to ensuring the quality of your water.

Source of Water Supply

The water we use in the village is drawn from the Niagaran Dolomite Aquifer. This aquifer is overlain by 130 to 165 feet of glacial drift. We currently have two wells in the village that pump water from this aquifer into our system. Well #1 that is located at 524 N. 9th Street is 275 feet deep and can pump 400 gallons a minute into the system. Well #2 located at 437 Center Ave., is 360 feet deep and can pump 430 gallons a minute. Both wells are computer controlled, and have the ability to be run by a portable generator in an emergency. A third well has been dug and is currently having the pumping equipment and well house constructed. This well is located in the business park and should come on line late in 2003.

Water Storage Capacity

The water that is pumped from the wells is stored in the system mains and two reservoirs. In 2002 the village was serviced by 84,170 feet of water main with 958 water services connected to it. Pressure for the system is supplied by two reservoirs. The main reservoir is an elevated steel storage tank of 250,000-gallon capacity. It provides pressure to the system through the gravitational pull on the water stored 143 feet high. The second reservoir is a concrete reservoir at well #1 with a capacity of 60,000 gallons. It is stored mostly below ground level and provides pressure to the system by pumping the water into the mains at 420 gallons per minute as needed. These systems are all computer controlled.

Water Monitoring and Testing

Oostburg Municipal Water Department routinely monitors for constituents in your drinking water according to Federal and State laws. The water analysis table shows the results of our monitoring for 2002. This testing gave us an overall picture of the quality of our water for the year.

Bi-monthly tests are performed throughout the distribution system to look for indicator organisms called coliform bacteria. If these bacteria are detected, there may be a potential for harmful organisms also to be present. Last year we collected 24 samples to monitor for this condition. There have been no unsafe samples results since 1990. This is a very good record.

All drinking water, including bottled water, may reasonably be expected to contain at

least small amounts of some constituents. The presence of constituents does not necessarily indicate that the water poses a health risk. More information about constituents and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

Taste and Odor

Our water supply, coming from an aquifer deep in the ground, is rich in solids consisting mostly of minerals. These minerals dissolve over time and become part of the water supply. This can result in occasional water complaints, but are not harmful for consumption or health.

At times our water customers have reported "brown" or "rust colored" water. This is due to the high iron content of our water supply, resulting in iron particles settling on the surfaces of the water mains and household water pipes. This condition is most noticeable when there is rapid water movement through the mains such as when there is a water main break, which stirs these particles and suspends it in the water supply until it can settle again. While this occurrence may be unpleasant, it is not harmful for consumption. In 2000, the Village of Oostburg began adding silicates to the water supply in an effort to control the rust color in the water. This may take several years to take effect.

Occasionally we get reports on a "sulfur smell" or "rotten egg smell" in the water. This can be caused by the sulfate content of our water. This is often most noticeable on hot water from the water heater. Routine flushing of the water heater can help reduce this problem. Currently the Village of Oostburg is adding Chlorine to the water supply in an attempt to improve this problem.

The Village of Oostburg currently has numerous dead ends in the water distribution system. These dead ends do not get the system wide water flow that "looped" mains get; therefore higher levels of these solids have a chance to settle in the mains. To help with this problem, waterworks personnel flush all hydrants (to stir up and wash out settled solids), including dead ends, twice per year.

Definitions

In the following water analysis table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

> - Greater Than Symbol

< - Less Than Symbol

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) or Micrograms per liter (ug/l)- one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

Parts per quadrillion (ppq) or Picograms per liter (picograms/l) - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in $10,000,000,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Million Fibers per Liter (MFL) - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level (MCL)- The "Maximum Allowed" (MCL) is 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. MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Maximum Contaminant Level Goal (MCGL) - The "Goal"(MCLG) is 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.

2001 SUMMARY OF WATER TEST RESULTS

(results taken from the most recent water sample testing)

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
Total Coliform Bacteria	N	1		0	presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment
Fecal coliform and *E.coli*	N	0		0	a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or *E. coli* positive	Human and animal fecal waste
Turbidity	N	0		n/a	TT	Soil runoff
Radioactive Contaminants						
Gross Beta emitters	N	3.2	PCi/l	0	50	Decay of natural and man-made deposits
Gross Alpha emitters	N	3.6	pCi/1	0	15	Erosion of natural deposits
Combined radium	N	0	pCi/1	0	5	Erosion of natural deposits
Inorganic Contaminants						
Alkalinity $CaCO_3$	N	94	mg/l	N/A	N/A	Erosion of natural deposits
Aluminum	N	0.016	mg/l	0.05	0.05	Erosion of natural deposits
Antimony	N	< 0.003	mg/l	.006	.006	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	N	1	ppb	n/a	50	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Asbestos	N	Waived	FIB/L	7 MILL	7 MILL	Decay of asbestos cement water mains; erosion of natural deposits
Barium	N	.013	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beryllium	N	<.00034	mg/l	0.004	0.004	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries

Cadmium	N	<.0001	mg/l	0.005	0.005	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Calcium	N	117	mg/l	N/A	N/A	Erosion of natural deposits
Chromium	N	2	ppb	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper	N	.092	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Cyanide	N	Waived	mg/l	0.2	0.2	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride	N	.4	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Hardness Total $CaCO_3$	N	467	mg/l	500	500	Erosion of natural deposits
Iron	N	0.16	mg/l	0.3	0.3	Erosion of natural deposits
Lead	N	6.8	ppb	0	AL=15	Corrosion of household plumbing systems, erosion of natural deposits
Magnesium	N	43	mg/l			Erosion of natural deposits
Manganese	N	0.007	mg/l	0.05	0.05	Erosion of natural deposits
Mercury (inorganic)	N	<.00015	mg/l	0.002	0.002	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nickel	N	<.0097	mg/l	0.1	0.1	Erosion of natural deposits
Nitrate NO_3(as Nitrogen)	N	.03	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite NO_2(as Nitrogen)	N	<0.0024	mg/l	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	N	<0.001	mg/l	0.05	0.05	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Silver	N	<0.0005	mg/l	0.1	0.1	Erosion of natural deposits
Sodium	N	46	Ppm	n/a	n/a	Erosion of natural deposits
Sulfate	N	Waived	mg/l	250	250	Erosion of natural deposits
Thallium	N	<0.001	mg/l	0.002	0.002	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Zinc	N	0.006	mg/l	0.002	0.002	Erosion of natural deposits

Synthetic Organic Contaminants including Pesticides and Herbicides

2,4-D	N	<0.05	ug/l	70	70	Runoff from herbicide used on row crops
2,4,5-TP (Silvex)	N	<0.05	ug/l	50	50	Residue of banned herbicide
Alachlor	N	<0.1	ug/l	0	2	Runoff from herbicide used on row crops
Atrazine	N	<0.1	ug/l	3	3	Runoff from herbicide used on row crops
Benzo(a)pyrene (PAH)	N	Waived	nanograms/l	0	200	Leaching from linings of water storage tanks and distribution lines
Carbofuran	N	<0.9	ug/l	40	40	Leaching of soil fumigant used on rice and alfalfa
Chlordane	N	<0.2	ug/l	0	2	Residue of banned termiticide

Dalapon	N	<0.5	ug/l	200	200	Runoff from herbicide used on rights of way
Di(2-ethylhexyl)adipate	N	<0.6	ug/l	400	400	Discharge from chemical factories
Di(2-ethylhexyl)phthalate	N	<0.6	ug/l	0	6	Discharge from rubber and chemical factories
Dioxin [2,3,7,8-TCDD]	N	Waived	picograms/l	0	30	Emissions from waste incineration and other combustion; discharge from chemical factories
Endothall	N	<9.0	ug/l	100	100	Runoff from herbicide use
Endrin	N	<0.01	ug/l	2	2	Residue of banned insecticide
Ethylene dibromide	N	<0.05	ug/l	0	50	Discharge from petroleum refineries
Glyphosate	N	<6.0	ug/l	700	700	Runoff from herbicide use
Heptachlor	N	<0.04	ug/l	0	0.4	Residue of banned termiticide
Heptachlor epoxide	N	<0.02	ug/l	0	0.2	Breakdown of heptachlor
Hexachlorobenzene	N	<0.1	ug/l	0	1	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene	N	<0.1	ug/l	50	50	Discharge from chemical factories
Lindane	N	<0.02	ug/l	0.2	0.2	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor	N	<0.1	ug/l	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl [Vydate]	N	<1.0	ug/l	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCBs [Polychlorinated biphenyls]	N	<0.5	ug/l	0	1	Runoff from landfills; discharge of waste chemicals
Pentachlorophenol	N	<0.02	ug/l	0	1	Discharge from wood preserving factories
Picloram	N	<0.05	ug/l	500	500	Herbicide runoff
Simazine	N	<0.07	ug/l	4	4	Herbicide runoff
Toxaphene	N	<1.0	ug/l	0	3	Runoff/leaching from insecticide used on cotton and cattle

Volatile Organic Contaminants

Benzene	N	<0.23	ug/l	0	5	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride	N	<0.24	ug/l	0	5	Discharge from chemical plants and other industrial activities
Chlorobenzene	N	<0.22	ug/l		100	Discharge from industrial chemical factories
o- Dichlorobenzene	N	<0.32	ug/l	600	600	Discharge from industrial chemical factories
p- Dichlorobenzene	N	<0.29	ug/l	75	75	Discharge from industrial chemical factories
1,2 - Dichloroethane	N	<0.18	ug/l	0	5	Discharge from industrial chemical factories
1,1 - Dichloroethylene	N	<0.25	ug/l	7	7	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene	N	<0.21	ug/l	70	70	Discharge from industrial chemical factories
trans - 1,2 -Dichloroethylene	N	<0.26	ug/l	100	100	Discharge from industrial chemical factories
Dichloromethane	N	<0.15	ug/l	0	5	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane	N	<0.23	ug/l	0	5	Discharge from industrial chemical factories

Ethylbenzene	N	<0.23	ug/l	700	700	Discharge from petroleum refineries
Styrene	N	<0.21	ug/l	100	100	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene	N	<0.25	ug/l	0	5	Leaching from PVC pipes; discharge from factories and dry cleaners
1,2,4 -Trichlorobenzene	N	<0.32	ug/l	70	70	Discharge from textile-finishing factories
1,1,1 - Trichloroethane	N	<0.24	ug/l	200	200	Discharge from metal degreasing sites and other factories
1,1,2 -Trichloroethane	N	<0.23	ug/l	3	5	Discharge from industrial chemical factories
Trichloroethylene	N	<0.23	ug/l	0	5	Discharge from metal degreasing sites and other factories
Toluene	N	<0.23	ppm	1	1	Discharge from petroleum factories
Vinyl Chloride	N	<0.26	ug/l	0	2	Leaching from PVC piping; discharge from plastics factories
Xylenes	N	<0.44	ppm	10	10	Discharge from petroleum factories; discharge from chemical factories

So What Does It Mean?

As you can see by the water analysis table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

All sources of drinking water (including bottled water) are subject to potential contamination by constituents that are naturally occurring or are man made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials.

Conclusion

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

We at the Village of Oostburg work hard to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. If you have any questions about this report or concerning your water utility, please contact Roger Oonk, Director of Public Works (564-3844) or Kim Simmelink, Clerk/Treasurer (564-3214). We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled board meetings. They are held on the second Monday of every month at the Oostburg Civic Center, 215 North 8th Street, Oostburg, at 7:00PM.

Related World Wide Web Water Quality Links

Water on Tap: A Consumer's Guide to the Nation's Drinking Water
http://www.epa.gov/OGWDW/wot/ontap.html

Drinking Water Glossary
http://www.epa.gov/OGWDW/glossary.html

The Water Quality Information Center
National Agricultural Library – U.S. Department of Agriculture
http://www.nal.usda.gov/wqic/

Wisconsin Department of Natural Resources
http://www.dnr.state.wi.us/