

ANNUAL

# DRINKING WATER QUALITY REPORT FOR 2002

# 2003

The Holland Board of Public Works, a community-owned utility, operates the Holland Water Treatment Plant. The HBPW provides electric, water, and wastewater treatment to the greater Holland, Michigan area.



HBPW Corporate Office 625 Hastings Avenue Holland, Michigan 49423 616.355.1500 616.355.1550 Fax



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

## Drinking Water Provided by the Holland Board of Public Works Surpasses All Federal & State Requirements



The Holland Board of Public Works is committed to providing safe, dependable, quality drinking water. We are pleased to inform you that our drinking water met and surpassed every federal and state requirement in 2002.

This Consumer Confidence Report (CCR) is a result of a Federal regulation passed by the U.S. Environmental Protection Agency as part of the 1996 Safe Drinking Water Act Amendments, requiring that all community water systems provide customers with an annual water quality report.

As a state certified microbiological laboratory, the Holland BPW's Water Treatment Plant in conjunction with three independent laboratories, conducted over 50,000 tests encompassing more than 200 contaminants during the year 2002. This annual Drinking Water Quality Report provides you with an overview of those results and of the quality of drinking water delivered to you during the period of January 1 through December 31, 2002.

The Holland Water Treatment Plant draws fresh water from Lake Michigan through an intake structure located near the shoreline. An intake pipe delivers the water to the plant where it is then mixed with sodium hypochlorite for disinfection, with fluoride to help prevent tooth decay and followed with the addition of alum to aid in removing particles. The water is then moved to one of the Holland BPW tanks where it sits for a period of time during which particles are settled out of the water.

Next, the water is filtered through sand and anthracite coal.

Following the completion of testing and treatment, the water is then pumped into large mains, which carry the water to the HBPW distribution system, and to the customer's tap.

Plant operators monitor water quality extensively at each stage of the water treatment. In-plant samples are collected and tested on site throughout the day by a certified operator. On-line analyzers monitor the process on a continuous basis.

In addition, samples of the treated water are regularly collected from various locations throughout the distribution system and are analyzed for many organic and inorganic substances.

The Holland BPW has consistently safeguarded its water supply and maintained a system which has never violated a maximum contaminant level or any other water quality standard. The HBPW is pleased to provide this information and would be happy to answer any questions regarding the quality of the drinking water.

For more information, contact the Holland Water Treatment Plant personnel at 616/355.1589, or attend a public board meeting held at the HBPW Service Center located at 625 Hastings Avenue (just west of US 31) on the second or third Monday of every month at 4:00 pm. We recommend that you call to confirm the meeting time and date, prior to attending.

## HOW YOUR DRINKING WATER IS TREATED AND MONITORED

The table below lists the Environmental Protection Agency's (EPA) regulated and unregulated contaminants detected in Holland's drinking water during 2002.

All of the contaminants are well BELOW allowed levels. Not listed are over 200 other contaminants, including pesticides and herbicides, for which we tested and that were not detected.

# 2002 Water Quality Test Results

SUBSTANCES (UNITS)	HIGHEST LEVEL DETECTED	EPA'S MCL	EPA'S MCLG	RANGE OF DETECTION	SOURCE OF CONTAMINATION
<b>REGULATED AT THE TREATMENT PLANT</b>					
Alpha Particles (pCi/L)	<3	15	0	<3	Erosion of natural deposits
Beta Particles (pCi/L) - tested 5/5/98*	<4	50**	0	<4	Decay of natural and man-made deposits
Fluoride (ppm)	1.2	4.0	4	0.46 - 1.2	Water additive which promotes strong teeth; erosion of natural deposits discharge from fertilizer and aluminum factories
Nitrate (ppm)	0.7	10	10	0 - 0.7	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits
Turbidity (NTU)	0.07	1.0	n/a	0.02 - 0.07	Soil runoff
<b>REGULATED AT THE CUSTOMER'S TAP</b>					
Copper (ppm) - distribution***	0.096 90th Percentile	1.3 Action Level	1.3	<0.004 - 0.118	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb) - distribution***	2 90th Percentile	15 Action Level	0	<1 - 15	Corrosion of household plumbing systems; erosion of natural deposits
<b>REGULATED IN THE DISTRIBUTION SYSTEM</b>					
Chlorine (ppm)	0.98	4.0 MRDL	4.0 MRDLG	0.86 - 0.98	Water additive used to control microbes.
Total Trihalomethanes (ppb) (TTHM Running Annual Average 23.7)	33.8****	80	0	14.1 - 33.8	By-product of drinking water chlorination
Haloacetic Acids (ppb)	29.3****	60	n/a	13.0 - 29.3	By-product of drinking water chlorination
<b>UNREGULATED CONTAMINANTS</b>					
Sodium (ppm)	16.2	Not regulated	n/a	7.1 - 16.2	Naturally occurring mineral
Chlorodibromomethane (ppb)	3.1	n/a	n/a	1.6 - 3.1	By-product of drinking water chlorination
Chloroform (ppb)	12.2	n/a	n/a	3.5 - 12.2	By-product of drinking water chlorination
Dichlorobromomethane (ppb)	7.7	n/a	n/a	3.1 - 7.7	By-product of drinking water chlorination

The Holland BPW performed additional testing for other unregulated contaminants. No detections were found. Results of these 2002 tests and early 2003 tests are available by contacting Jim Van De Wege at the Water Treatment Plant at 616.355.1589. Total Organic Carbon (TOC) results are also available upon request.

### Table footnotes

- \* The state allows the HBPW to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. All of the data is representative of the water quality, but some are more than one year old.
- \*\* EPA considers 50 pCi/L to be the level of concern for beta particles.
- \*\*\* Holland had zero sites that exceeded the action levels for lead or copper.
- \*\*\*\* Based on quarterly average.

### Key terms and abbreviations

- Action Level ..... The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- MCL ..... **Maximum Contaminant Level** is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available treatment technology.
- MCLG ..... **Maximum Contaminant Level Goal** is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency and allow for margin of safety.
- MRDL ..... **Maximum Residual Disinfectant Level** is 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.
- MRDLG ..... **Maximum Residual Disinfectant Level Goal** is 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.
- n/a ..... **Not applicable**.
- ND ..... **Non-Detect** Laboratory analysis indicates the contaminant is not detected with present technology.
- NTU ..... **Nephelometric Turbidity Units** (a measure of the clarity of water).
- 90th Percentile ..... 90 percent of the samples were below the number listed. (Copper = .096 ppm; Lead = 2 ppb)
- pCi/L ..... **Picocuries per liter** (a measure of radioactivity).
- ppb ..... **Parts per billion**
- ppm ..... **Parts per million**
- Turbidity ..... Is a measure of the cloudiness of water. We monitor it because it is a good indicator of the effectiveness of our filtration system.
- Unregulated Contaminants ..... Are those for which EPA has not established drinking water standards. Monitoring helps EPA to determine where these contaminants occur and whether it needs to regulate those contaminants.

# H2O

## CONTAMINANTS THAT MAY BE PRESENT IN UNTREATED WATER

*The Holland Board of Public Works met all federal and state drinking water regulations without exception during 2002.*

Federal law requires that the highest level of any contaminant detected in our treated water be reported to you. Those results are listed in this document.

Federal law also requires that we explain the contaminants that may be present in source water (untreated water), not just Lake Michigan which is the source for the Holland water system, but other types of source water as well.

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 and 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:

- 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 EPA prescribes regulations which set limits on the amount of certain contaminants in water provided by public water systems.

The Federal 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 (800/426.4791).

## CUSTOMERS WITH SPECIAL HEALTH CONCERNS

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 from their health care providers. The Environmental Protection Agency/Center for Disease Control offers guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants. These are available by calling the Safe Drinking Water Hotline, 800/426.4791.

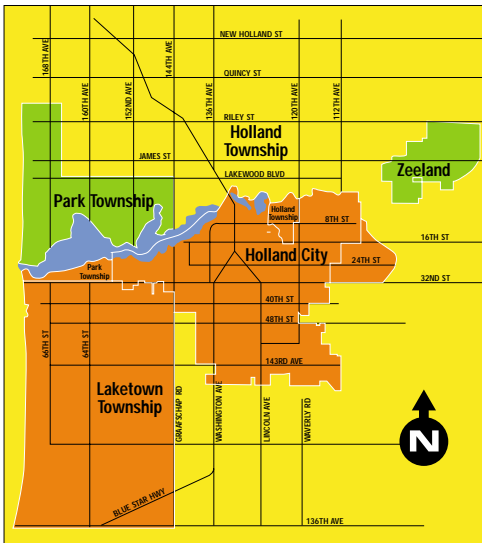
## WHAT IS SOURCE WATER ASSESSMENT?

A Source Water Assessment indicates the vulnerability of a water supply to potential sources of contamination. The Michigan Department of Environmental Quality (MDEQ) has received approval from the United States Environmental Protection Agency (USEPA) for the source water assessment program for the State of Michigan. The MDEQ has initiated the implementation of the program and ultimately all Michigan water suppliers will be provided a Source Water Assessment.

## HBPW TESTS FOR CRYPTOSPORIDIUM

Each month, the Holland Board of Public Works voluntarily tests the water coming into the treatment plant for the presence of Cryptosporidium. This testing is not required by state or federal authorities, but is done to ensure that our drinking water is the highest quality possible.

Cryptosporidium is a disease of the intestinal tract that can be transmitted through contaminated food, water or by direct contact with human or animal waste. It is sometimes present in surface waters, especially during periods of stormwater runoff. Those who are infected with this parasite may experience gastro-intestinal illness. The Holland BPW did not detect Cryptosporidium in 2002.



Areas served by the Holland BPW

Retail
  Wholesale



**Protecting  
our  
drinking  
water**

Following recent events in our nation, the issue of water security is a concern to everyone. The HBPW water system was secure prior to the events of September 11, 2001. Since that time, the

The Holland BPW pumped 5.0 billion gallons of water from the Water Treatment Plant during 2002.

The average daily pumpage for the Holland Water Treatment Plant is: 13.5 million gallons per day.

Holland Board of Public Works has taken additional security measures to protect the HBPW water supply, and we will continue to monitor ways to improve the security of the water supply.

**FOR MORE INFORMATION**

**FOR WATER SYSTEM INFORMATION, CONTACT:**

Holland Water Treatment Plant  
 46 N. Lakeshore Drive  
 Holland, Michigan 49424  
 616.355.1589  
 616.399.7114 Fax  
[www.hollandbpw.com](http://www.hollandbpw.com)

John Van Uffelen, PE.  
 Director, Water/Wastewater

James Van De Wege  
 Water Plant Superintendent

Dennis Willaman, PE.  
 Water/Wastewater Services  
 Superintendent

**TO REPORT A WATER EMERGENCY, CALL:**

Our 24-hour line, 616.355.1500.

**FOR THE EPA'S SAFE DRINKING WATER HOTLINE NUMBER, CALL:**

1.800.426.4791 or visit their web site at [www.epa.gov/ogwdw](http://www.epa.gov/ogwdw)

**FOR INFORMATION ON THE HBPW BOARD MEETINGS AND GENERAL INFORMATION, CALL:**

616.355.1500

**ANNUAL DRINKING WATER QUALITY REPORT FOR 2002**

The HBPW is a member of the American Water Works Research Foundation, and the American Water Works Association, with staff actively involved in the Michigan Section.



**For less than \$1.00,  
Holland BPW customers  
get 1000 gallons of water  
delivered 24-hours a day,  
7 days a week.**

Printed on recycled paper.



HBPW Corporate Office  
 625 Hastings Avenue  
 Holland, Michigan 49423

PRSRT STD  
 U.S. POSTAGE  
 PAID  
 GRAND RAPIDS, MI  
 PERMIT #17