



# Your Water

## Dear Water Customer:

We are pleased to present a summary of the quality of the water provided to you during the past year. The Safe Drinking Water Act (SDWA) requires that utilities issue an annual water quality report to customers in addition to other notices that may be required by law. This report details where our water comes from, what it contains, and the risks our water testing and treatment are designed to prevent. Last year, as in the past, your tap water met all U.S. Environmental Protection Agency and state drinking water standards. **BIWW vigilantly safeguards its water sup-**

**plies and once again we are proud to report that our system meets or exceeds all established quality standards.**

Find out more about Big Island Water Works on the Internet at [www.ci.sandusky.oh.us](http://www.ci.sandusky.oh.us)



The new Shoreline Park Fountain

## Where does your water come from?

### Source Water Assessment

The City of Sandusky Public Water System uses surface water drawn from two intakes, a main intake located in Lake Erie and an emergency back-up intake located in Sandusky Bay. Lake Water is gravity-fed into the Big Island Treatment Plant by a 42" steel intake pipe. For the purposes of source water assessments, in Ohio all surface waters are considered to be susceptible to contamination. By their nature, surface waters are accessible and can be readily contaminated by chemicals and pathogens, with relatively short travel times from source to intake. Although the water system's main intake is located offshore in Lake Erie, the proximity of several onshore sources increases the susceptibility of the source water to contamination. The City of Sandusky Public Water System's drinking water source protection area is susceptible to contamination from municipal sewage treatment plants, industrial

wastewater, combined sewer overflows, home sewage disposal system discharges, open water dredge disposal operations, and accidental releases and spills, especially from commercial shipping operations and recreational boating.

The City of Sandusky Public Water System treats the water to meet drinking water quality standards, but no single treatment technique can address all potential contaminants. The potential for water quality impacts can be further decreased by implementing measures to protect Lake Erie. More detailed information is provided in the City of Sandusky Public Water System's Drinking Water Source Assessment report, which can be obtained by calling 419-627-5805 or by visiting the Ohio EPA's Source Water Assessment and Protection Program Web page at <http://www.epa.state.oh.us/ddagw/pdu/swap.html>.

## Did you know?

Grass clippings, leaves, pop cans and other forms of litter in the roadway cause plugging of the storm drains along the sides of the road resulting in the flooding of streets when it rains. Some of these materials wash into the storm sewer with the rain and end up in the bay increasing the amount of solid materials in the bay that detract from the natural beauty. Some of these solids break down while others do not. This causes a potential hazard to the fish and other aquatic life. You can do your part by keeping grass clippings and litter out of the streets.

# What's in your Water?

*El informe contiene información importante sobre la calidad del agua en su comunidad. Tradúzcalo o hable con alguien que lo entienda bien.*

The table shows the results of our water-quality analyses. Every regulated contaminant we detected in the water, even in the minutest traces, is listed here. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health, the amount detected, the usual source of such contaminant, footnotes explaining our findings, and a key to units of measurements. Terminology definitions:

**AL or Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system shall follow.

**MCL or Maximum Contaminant Level:** The highest level of a contaminant that is allowed in drinking water.

**MCLG or 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 or Maximum Residual Disinfectant Level:** 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 or Maximum Residual Disinfectant Level Goal:** The level of drinking water disinfectant below which there is no known or expected risk to health.

**NTU = Nephelometric Turbidity Units**

**pCi/l = picocuries per liter (a measure of radioactivity)**

**ppb = part per billion, or micrograms per liter (ug/l)**

**ppm = parts per million, or milligrams per liter (mg/l)**

**Treatment technique:** A required process intended to reduce the level of a contaminant in drinking water.



## Water-Quality Data Table

Contaminant (inorganic)	Date Test	MCL	MCLG	Detected	Unit	Range	Major Sources	Violation
1. Barium	1/19/06	2000	2000	13.8	ppb	0.1-13.8	Discharge of drilling wastes and metal refineries; Erosion of natural deposits.	NO
2. Nitrate	3/6/06	10	10	1.68	ppm	0.00-1.68	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	NO
3. Fluoride	8/31/06	4	4	1.16	ppm	0.41-1.16	Erosion of natural deposits; Water additive which promotes strong teeth. Discharge from fertilizer and aluminum factories.	NO
4. Lead	6/24/06	AL=15	0	* 90th% g	ppb	1 of 30	Sites > AL : Corrosion of household plumbing system; Erosion of natural deposits.	NO
5. Copper	6/24/06	AL=1300	AL=1300	14	ppb	0	Corrosion of household plumbing system; Leaching from wood preservatives.	NO
Disinfectant Residual	Date Test	MCL	MCLG	Detected	Unit	Range	Major Sources	Violation
6. Chlorine	8/5/06	4	4	2.20	ppm	0.30-2.00	Water additive used to control microbes.	NO
Contaminant (microbiological)	Date Test	MCL	MCLG	Detected	Unit	Range	Major Sources	Violation
7. Turbidity	8/4/06	0.3	<0.10	2.6	ntu	75	*Low% : Soil runoff; sediment from lake bottom.	YES
Contaminant (organic)	Date Test	MCL	MCLG	Detected	Unit	Range	Major Sources	Violation
8. Total Organic Carbon	6/6/06	TT	<2.0	2.5	ppm	1.6-2.5	Naturally present in the environment.	NO
9. TTHMs (Total Trihalomethanes)	6/6/06	80	0	47.5	ppb	33.0-47.5	By-product of drinking water chlorination.	NO
10. HAA5 (Haloacetic Acid)	6/6/06	60	0	21.4	ppb	13.6-21.4	By-product of drinking water chlorination.	NO

## One Violation—Manganese

There was one violation experienced during 2006.

### Explanation of the Violation

#### What happened?

The Big Island Water Works Plant experienced a high manganese event starting 8/3/06 at 8:00 AM and ending 8/5/06 at 4:00 PM. During this time period, customers may have noticed yellow / brown water coming from their household faucets.

#### Why did this happen?

It is very difficult to be 100% sure why such a high concentration of dissolved manganese was held in suspension in the lake water coming into Big Island on 8/3/06. We suspect a large algae bloom ran through its life cycle and died off near the intake. As the algae decayed, it reduced the amount of oxygen in the water, which we know as dead zones. Water with reduced oxygen content can hold more manganese in solution.

#### What was done to treat the yellow water?

The Big Island treatment process is not designed to treat such

high concentrations of manganese. We adjusted the treatment process to treat for the high manganese as best we could. Filtered water turbidity continued to be an acceptable level of 0.06 to 0.04 NTU (MCL 0.30 NTU) throughout the event. The turbidity was created when chlorine oxidized the manganese out of solution in the clearwell. When the turbidity was lowered to acceptable levels, 48 fire hydrants were flushed to remove the yellow water from the system.

#### What was done to notify the public during the event?

During the event a public announcement was issued on the local radio station and a newspaper article followed in both the Morning Journal and the Sandusky Register. On 8/17/06 a legal notice with all EPA required information about the event was published in the Sandusky Register. To finish the Ohio EPA's public notification requirements, a copy of the legal public notice was mailed to all water customers.

# OVERVIEW

In 2006, the filtration plant treated 2.8 billion gallons of Lake Erie water and pumped it into the distribution system. The distribution system delivers the treated water to City of Sandusky customers and the surrounding area. This area includes, but is not limited to, the City of Sandusky, Perkins Township, Margaretta Township, the communities of Crystal Rock and Whites Landing and the City of Bellevue.

## OTHER MONITORING

Big Island Water Works has detected manganese in the finished water at levels of 232 ug/L on 8/03/06. Manganese occurs naturally in Lake Erie and the OEPA considers it a secondary contaminant. Manganese does not have negative health effects. It does however, have negative effects on the water's appearance and usability. At levels above 50 mg/L, it can cause problems such as visible black "specks" in ice cubes, staining of plumbing fixtures, the water may have brown or black discolorations, and it can also cause the water to have a metallic taste.

## Questions?

Where does your drinking water come from? How do you know if your drinking water is safe? How can you protect it? What can you do if there is a problem with your drinking water?

To help answer these and other questions, the U.S. Environmental Protection Agency prepared [Water on Tap: What You Need To Know](#) in English, Spanish, and Chinese.

To order a copy of the English version by mail:

Water On Tap, #634D (Please allow 4 to 6 weeks for delivery)

Consumer Information Center

Pueblo, CO 81009

OR Get it online at - [www.epa.gov](http://www.epa.gov)

## Unregulated Contaminants

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 the 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).

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, 800-426-4791.

*Cryptosporidium* and *Giardia* are microbial pathogens found in surface water throughout the U.S. Although filtration removes *cryptosporidium* and *giardia*, the most commonly used filtration methods cannot guarantee 100 percent removal. Our most current test results for *Cryptosporidium* and *Giardia* are available by contacting the Sandusky Water Department. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *cryptosporidium* may cause *cryptosporidiosis*, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection.

## VARIANCES AND EXEMPTIONS

Big Island Water Works has been granted a reduced sampling schedule for lead and copper testing. This was granted because the lead and copper action levels were not exceeded for the last testing period in 2006. Our monitoring requirements consist of 30 samples taken at one time every three years. We will be taking our required 30 samples in 2009.



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**City of Sandusky**

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***A place where people choose  
to live, work and play***

**We're on the Web!**

**[ci.sandusky.oh.us](http://ci.sandusky.oh.us)**

We encourage public interest and participation in our community's decisions affecting drinking water. Regular City Commission meetings are held on the 2nd and 4th Mondays of each month in the First Floor Conference Room of the City building, 222 Meigs Street at 5:00 p.m. Please call 419-627-5850 for information on attending the next meeting. The public is always welcome. Find out more about Big Island Water Works on the Internet at [www.ci.sandusky.oh.us](http://www.ci.sandusky.oh.us)



**Contact Information**

Douglas A. Keller, Water Services Manager, prepared this report. Mr. Keller has twenty one years of water treatment experience at the Big Island Water Works. He holds a Class IV Water Treatment license for the State of Ohio.

If you have any questions, comments, or suggestions, please contact him at (419) 627-5805. Water quality data for community water systems throughout the United States is available at [www.waterdata.com](http://www.waterdata.com). Learn more about the Big Island Water Works water system at [www.ci.sandusky.oh.us](http://www.ci.sandusky.oh.us)

**City of Sandusky**

**Office Directory**

**City Commission  
419-627-5850**

**Manager's Office  
419-627-5844**

**Engineering  
419-627-5829**

**Big Island Water  
Works  
419-627-5805**

**Water  
Pollution Control  
419-627-5907**

**Horticultural Services  
419-627-5884**

**Community  
Development  
419-627-5872**