

A Report

Village of Lockland

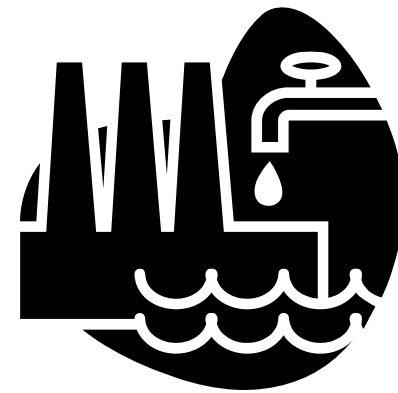
Drinking Water Quality

Have A Water Question?

Call Public Works Director:

Dean Walden

513-733-0957



Refreshing,  
Safe, Quality, Water  
For Everyone

2008  
Annual Consumer  
Confidence Report

## OUR NATURAL RESOURCE GROUND WATER

The Lockland water is from three ground water wells located about three miles north in Sharonville. Well No. 5,500 gpm, Well No. 5,895gpm and Well No. 9,900 gpm. All three are about 200 feet deep.

This water resource has a high susceptibility to contamination due to the sensitive nature of the sand and gravel aquifer in which the water wells are located and the existing potential contaminant sources (commercial and manufacturing establishments). However, the wells being situated at a depth of about 200 feet provides some natural protection against the downward migration of contamination. This sensitive rating does not mean the well field will be impacted by potential contaminant sources, only that conditions are such that ground water could be impacted by potential contaminant sources.

To minimize future potential contamination to the well field Lockland has been active since 1999 in implementing EPA recommended protective strategies:

- Wellhead Protective Delineation-1999
- Wellhead Protection Inventory of Potential Pollution Sources-2001
- Resurvey of Potential Sources-2002, 2003, 2007/8
- Developed Wellhead Management Plan-2003
- EPA awarded Lockland a certificate commending the Village for their Wellhead Protection Program

- Installed a single phase arrester and surge protection for the water plant electrical system.
- Installed 3 water hook ups for Jim Brown Park
- Completed energy study for water system and looking into cost saving upgrade

## PLANNED 2009 IMPROVEMENTS

- Automating the water plant to run 24 hours a day. This will include installing electrical control valves, SCADA for the operation of the water plant and an auto phone dialer for the computer. This will free up a man for field work lowering over all costs.
- Map the water system: water mains, main valves and curb service valves this information will be included on the County's CAGIS system and membership will allow our water department access to other utility information which will help us make repairs quicker, safer for our employees and at lower cost.
- Replace the existing cast iron water plant aerator with a new stainless unit. The new aerator will be fabricated locally at a cost savings up to \$20,000.
- Lockland has applied for over 18 million in Stimulus Grants to replace raw water main from well field with a new 16" main, replace all water mains 6" and smaller through out the village.

## WHO OPERATES THE WATER PLANT?

The Water Plant is under the director of Public Works  
Dean Walden

Phone: 513-733-0957 or Voice Mail: 513-761-1420 ext. 106

The Ohio EPA surveys the water plant operation annually for compliance with regulations and approved laboratory procedures.

The Water Plant Operators are also licensed by the  
State of Ohio

<u>Operator</u>	<u>License No.</u>	<u>Class*</u>
Mike Foster Operator of Record	2-01-024	II Water Supply
Gary Koehne Secondary ORC	2-78-47	II Water Supply

\*Class II license is for all water plants of Lockland's size and type of treatment process, as well as distribution system.

## KEEPING THE PLANT UP TO DATE

In 2008 the following water plant improvements were completed:

- Replaced a 16" main valve in the water distribution system. Thanks to our new valve operating machine 4 other 16" valves are operable.
- Replaced 20 + water meters that were not working properly.
- Repaired 5 water main leaks.

## WATER TREATMENT PROCESS

The well water is pumped to the water plant where the treatment process occurs. In 2008 162,000,000 gallons were treated and delivered to the Lockland customers - an average of 445,000 gallons per day.

Briefly the treatment process is as follows:

Lime (calcium hydroxide) - is added to precipitate the water hardness.

Alum - is used for coagulation of the precipitated hardness

Carbon dioxide and Calgon (sodium hexa meta phosphate) are used to minimize corrosion and scale formation in distribution system.

Chlorine - is added to maintain bacteria free water. The average residual free chlorine in the water during 2008 was 0.7 mg/l. EPA requires a minimum of 0.2 mg/l.

Sludge disposal - the removed hardness remains as sludge. Primarily calcium carbonate, is accumulated in two sludge pits. Once or twice a year the accumulated sludge is hauled to an EPA approved land fill.

# ROUTINE WATER QUALITY ANALYSIS

-Average 2008 daily quality control analysis:

<u>WATER</u>	<u>ANALYSIS</u>	<u>RESULTS</u>
Well	Hardness (daily)	396 mg/l
	Total Alkalinity (daily)	293 mg/l
	Bacteriological (24 samples)	all negative
Treated	Hardness (daily)	157 mg/l
	Total alkalinity (daily)	58 mg/l
	Bacteriological (24 samples)	all negative
Distribution System	Bacteriological (96 samples)	all negative

## ADDITIONAL EPA REQUIRED MONITORING

The following chart, Water Quality Monitoring Data, are the most recent monitoring results required by the EPA

Substance	Unit	MCL	Level Found	Violation	Analysis Date	Source
<b>Organics</b>					<b>Sample Date</b>	
VOC's	ppb	-	bdl	none	5/8/06	Byproduct of chlorination
Trihalomethanes	ppb	80	21.26	none	5/8/06	Byproduct of chlorination
Haloacetic acids	ppb	60	6.05	none	5/8/06	Byproduct of chlorination
<b>Inorganics</b>					<b>Analysis Date</b>	
Copper	Mg/l	AL 1.3	< 50.0 ug/l	none	9/13/08	Corrosion of household plumbing. Erosion of natural deposits.
Lead	Mg/l	AL0.015	< 5.0 ug/l	none	9/13/08	Corrosion of household plumbing. Erosion of natural deposits.
Chromium	ppb	100	<10	none	5/15/06	Natural occurring mineral in ground water
Cyanide	ppb	200	<20	none	5/9/06	Potential pollutant from industrial sources
Mercury	ppb	2	<0.2	none	5/9/06	Natural occurring mineral in ground water
Nickel	ppb	n/a	<0.5	none	5/15/06	Natural occurring mineral in ground water
Nitrate	Mg/l	10	<0.20	none	3/13/08	Runoff fertilizer, septic leaching, sewage erosion of natural deposits
Selenium	ppb	50	<5	none	5/16/06	Natural occurring mineral in ground water
Thallium	ppb	2	<1	none	5/16/06	Natural occurring mineral in ground water
<b>DEFINITIONS/NOTES</b>						
ppb-parts per billion			Ppm- parts per million			AL- Action Level
MCL- Maximum Containment Level			VOC's- Volatile Organic Compounds			MRDL- Maximum Residual Disinfectant Level
bdl- below detectable level			mg/l- milligrams per liter			