City of Southgate

NORMA J. WURMLINGER
MUNICIPAL BUILDING

ATTENTION:
THIS IS AN IMPORTANT REPORT ON WATER QUALITY AND SAFETY

The Southgate Water Department is proud of our long history of providing quality drinking water to our customers and is honored to provide this report to you. The 2016 Consumers Annual Report on Water Quality shows the sources of our water, lists the results of our tests, and contains important information about water and health. The Southgate Water Department will notify you immediately if there is ever any reason for concern about our water. We are pleased to show you that the water we purchase from the Great Lakes Water Authority (GLWA), has surpassed water quality standards as mandated by the United States Environmental Protection Agency (EPA) and the State of Michigan Department of Environmental Quality (MDEQ).

ABOUT OUR SYSTEM

The Southgate Water Department provides water to approximately 30,000 residents, 11,000 homes, and over 2,000 businesses, schools, churches, apartment complexes and numerous guests and visitors. The Southgate Water Department also maintains over 100 miles of water main and approximately 1,300 fire hydrants. The Southwest Water Treatment Plant, owned and operated by the Great Lakes Water Authority (GLWA), is Southgate's major supplier of water. The Southwest Water Treatment Plant receives water from the Detroit River where underground pipes carry the water for treatment. The many miles of deep raw water tunnels are periodically inspected either by hard-hat divers or with cameras for structural integrity and zebra mussel infestation. If you would like to know more about this report, please contact the Southgate Water Department at (734) 258-3074.

NATIONAL PRIMARY DRINKING WATER REGULATIONS COMPLIANCE

In 2016, the Southgate Water Department had zero (0) monitoring and zero (0) maximum contaminant level violations and did not exceed any health standards.

In 2016, the Southgate Water Department had zero (0) monitoring violations of fecal coliform. The regulation requires confirmation of any positive result and that location and all points surrounding to be re-sampled within 24 hours of notification or the next business day.

"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 at (800-426-4791).

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 or 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 include:

- 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 storm water 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 storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, 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 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, EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) 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 is 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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791)."

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. City of Southgate is responsible for providing high quality drinking water, but 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 at http://www.epa.gov/safewater/lead.

Your source water comes from the Detroit River, situated within the Lake St. Clair, and several watersheds within U.S. and Canada. The Michigan Department of Environmental Quality in partnership with the Detroit Water and Sewerage Department and several other governmental agencies performed a source water assessment in 2004 to determine the susceptibility or relative potential of contamination. The susceptibility rating is on a seven-tiered scale from "very low" to "very high" based primarily on geologic sensitivity, water chemistry, and contaminant sources. The susceptibility of our Detroit River source water intakes were determined to be highly susceptible to potential contamination. However, all four Detroit water treatment plants that use source water from Detroit River have historically provided satisfactory treatment of this source water to meet drinking water standards.

GLWA has initiated source-water protection activities that include chemical containment, spill response, and a mercury reduction program. GLWA participates in a National Pollutant Discharge Elimination System permit discharge program and has an emergency response management plan. GLWA voluntarily developed and receive approval in 2016 for a source water protection program (SWIPP) for the Detroit River Intakes. The program includes seven elements that include the following: roles and duties of government units and water supply agencies, delineation of a source water protection area, identification of potential of source water protection area, management approaches for protection, contingency plans, siting of new sources and public participation and education. If you would like to know more information about the Source Water Assessment or SWIPP, contact your water department (734) 258-3074.

Southwest Water Treatment Plant
2016 Regulated Detected Contaminants Tables

Regulated Contaminant	Test Date	Unit	Health Goal	Allowed Level	Highest Level Detected	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Inorganic Chemicals – Monitoring at Plant Finished Water Tap								
Fluoride	05/10/2016	ppm	4	4	0.55	n/a	no	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	05/10/2016	ppm	10	10	0.53	n/a	no	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Disinfection By-Products – Monitoring in Distribution System Stage 2 Disinfection By-Products								
Regulated Contaminant	Test Date	Unit	Health Goal	Allowed Level	Highest LRAA	Range of Detection	Violation yes/no	Major Sources in Drinking Water
Total Trihalomethanes (TTHM)	2016	ppb	n/a	80	32	19 - 47	0	By-product of drinking water chlorination.
Haloacetic Acids (HAA5)	2016	ppb	n/a	60	15.2	9.8 - 19	0	By-product of drinking water disinfection.

Disinfection – Monitoring in Distribution System by Treatment Plant								
Regulated Contaminant	Test Date	Unit	Health Goal	Allowed Level	Highest RAA	Quarterly Range of Detection	Violation yes/no	Major Sources in Drinking Water
Total Chlorine Residual	Jan.-Dec. 2016	ppm	4	4	0.65	0.53-0.76	no	Water additive used to control microbes.

2016 Turbidity – Monitored every 4 hours at Plant Finished Water Tap			
Highest Single Measurement Cannot exceed 1 NTU	Lowest Monthly % of Samples Meeting Turbidity Limit of 0.3 NTU (minimum 95%)	Violation yes/no	Major Sources in Drinking Water
0.29 NTU	100%	no	Soil Runoff

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.

2016 Microbiological Contaminants – Monthly Monitoring in Distribution System					
Regulated Contaminant			Highest Number Detected	Violation yes/no	Major Sources in Drinking Water
Total Coliform Bacteria	0	Presence of Coliform bacteria > 5% of monthly samples	0	no	Naturally present in the environment.
E. coli Bacteria	0	A routine sample and a repeat sample are total coliform positive, and one is also fecal or E.coli positive.	0	no	Human waste and animal fecal waste.

2014 Lead and Copper Monitoring at Customers' Tap								
Regulated Contaminant	Test Date	Unit	Health Goal	Action Level	90th Percentile Value*	Number of Samples Over AL	Violation yes/no	Major Sources in Drinking Water
Lead	2014	ppb	0	15	0	0	no	Corrosion of household plumbing system; Erosion of natural deposits.
Copper	2014	ppm	1.3	1.3	0.114	0	no	Corrosion of household plumbing system; Erosion of natural deposits; Leaching from wood preservatives.

The 90th percentile value means 90 percent of the homes tested have lead and copper levels below the given 90th percentile value. If the 90th percentile value is above the AL additional requirements must be met.

Regulated Contaminant	Treatment Technique	Typical Source of Contaminant
Total Organic Carbon (ppm)	The Total Organic Carbon (TOC) removal ratio is calculated as the ratio between the actual TOC removal and the TOC removal requirements. The TOC was measured each quarter and because the level was low, there is no requirement for TOC removal.	Erosion of natural deposits

Radionuclides 2014

Regulated Contaminant	Test Date	Unit	Health Goal	Allowed Level	Level Detected	Violation yes/no	Major Sources in Drinking Water
Combined Radium Radium 226 and 228	5/13/2014	pCi/L	0	5	0.65 + or - 0.54	no	Erosion of natural deposits

Contaminant	[illegible]	MCL	Level Detected	Source of Contamination
Sodium (ppm)	n/a	n/a	5.41	Erosion of natural deposits

Collection and sampling result information in the table provided by Detroit Water and Sewerage Department (DWSD) Water Quality Division, ML Semegen.

The Great Lakes Water Authority monitored for Cryptosporidium in our source water (Detroit River) from our Southwest Water Treatment Plant during 2016. Cryptosporidium was detected twice in our source water samples. A follow-up water sample was collected from the treated water and Cryptosporidium was not found to be present. Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. 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. However, immunocompromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

2016 Key to the Detected Contaminant Tables		
Symbol	**Abbreviation for**	**Definition/Explanation**
>	Greater than	
AL	Action Level	The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.
HAA5	Haloacetic Acids	HAA5 is the total of bromoacetic, chloroacetic, dibromoacetic, dichoroacetic, and trichloroacetic acids. Compliance is based on the total.
LRAA	Locational Running Annual Average	The average of analytical results for samples at a particular monitoring location during the previous four quarters.
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 contaminant in drinking water below which there is no known or expected risk to health.
MRDL	Maximum Residual Disinfectant Level	The highest level of 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	The level of a drinking water disinfectant below which there is no known or expected risk to health. MRLDG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.
n/a	not applicable	
NTU	Nephelometric Turbidity Units	Measures the cloudiness of water.
pCi/L	Picocuries Per Liter	A measure of radioactivity.
ppb	Parts Per Billion (one in one billion)	The ppb is equivalent to micrograms per liter. A microgram = 1/1000 milligram.
ppm	Parts Per Million (one in one million)	The ppm is equivalent to milligrams per liter. A milligram = 1/1000 gram.
RAA	Running Annual Average	The average of analytical results for all samples during the previous four quarters.
TT	Treatment Technique	A required process intended to reduce the level of a contaminant in drinking water.
TTHM	Total Trihalomethanes	Total Trihalomethanes is the sum of chloroform, bromodichloromethane, dibromoochloromethane and bromoform. Compliance is based on total.
µmhos	Micromhos	Measure of electrical consuctance of water
°C	Celsius	A scale of temperature in which water freezes at 0° and boils at 100° under standard conditions.
ND	Not Detected	

The Southgate Water Board conducts meetings on a quarterly basis that are open to the public. For more information, call (734) 258-3074.

Odd / Even Outdoor Watering Schedule – 2017

There is a mandatory Odd/Even Watering Schedule in effect from: May 26 – September 1, 2017
Residents with an address ending in an even number would be permitted to water their lawns on even-numbered calendar dates.

If your address ends with:	You may use water outdoors on calendar dates ending in:
0 or 2 or 4 or 6 or 8	0, 2, 4, 6, 8

Residents with an address ending in an odd number would be permitted to water their lawns on odd-numbered calendar dates.

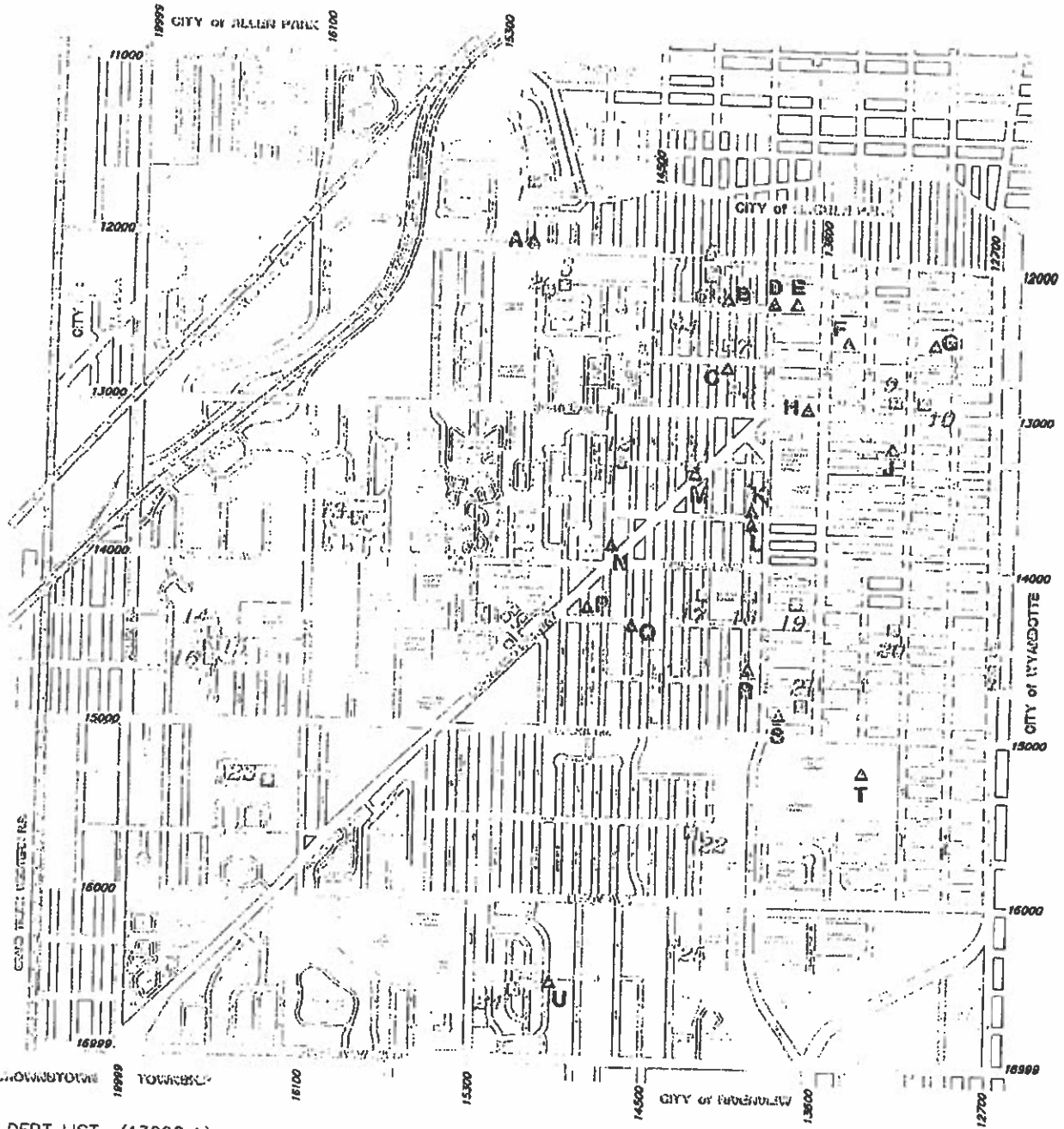
If your address ends with:	You may use water outdoors on calendar dates ending in:
1 or 3 or 5 or 7 or 9	1, 3, 5, 7, 9

Compliance with this watering schedule will be enforced.

CITY OF SOUTHGATE

NORTH

2017-2018 CB and PAVEMENT REPAIR PROGRAM
H.E.I. JOB No. 13092



⚠ WATER DEPT LIST (13092.A)

- A. NE CORNER BREST & DRAKE
- B. NW CORNER WESLEY & AGNES
- C. #12618–12630 AGNES
- D. NE CORNER WESLEY & DIX–TOLEDO (W.C.)
- E. #13710 WESLEY
- F. #13550–13570 BIRRELL
- G. #13108–13120 BIRRELL
- H. #13690 NORTH LINE (WAYNE COUNTY)
- J. #13248 PULLMAN
- K. #13543 LONGTIN
- L. #13621 LONGTIN
- M. #13554 DIX–TOLEDO (WAYNE COUNTY)
- N. #13760 MULBERRY "MULBERRY LANES"
- P. #14257 KENNEBEC
- Q. #14509 POPLAR
- R. #14555 LONGTIN
- S. #13726 SYCAMORE
- T. #13591 EUREKA ALLEY "PLANET FITNESS"
- U. NE CORNER COOK & WINDERMERE

STREET FUND LIST (13092.B)

1. #15065 PHEASANT RUN
2. #12202–12178 BUCKINGHAM
3. #14905–15003 YORKSHIRE
4. #12356–12363 HELEN
5. #12080 PEARL
6. #12137 PEARL
7. #12518 AGNES
8. #12703 AGNES
9. #13212–13224 CALLENDER
10. #13180 CALLENDER
11. E/S IRENE, S OF VENNESS
12. VENNESS, EAST OF MULBERRY
13. #15765 KINGSLEY
14. COUNTRYVIEW & CLEARVIEW
15. #14465 COUNTRYVIEW
16. COUNTRYVIEW & STOUTWOOD CT
17. #14160 PEARL
18. #14167 LONGTIN
19. #13704 ARGYLE
20. #13200–13203 CHESTNUT
21. CATALPA, WEST OF BURNS
22. #15414–15462 IRENE
23. #16500 JESSICA
24. COOK & DRAKE
25. #16115 HELEN