STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

C. HEIDI GRETHER
DIRECTOR

January 23, 2017

VIA E-MAIL

The Honorable Debbie Dingell
United States House of Representatives
Washington, DC 20515

Dear Congresswoman Dingell:

SUBJECT: Quality of Water Provided by Great Lakes Water Authority to Downriver Communities

Thank you for your January 17, 2017, letter jointly addressed to Governor Rick Snyder and Ms. Sue McCormick, Chief Executive Officer, Great Lakes Water Authority (GLWA), regarding the taste and odor issues in the Downriver communities. Please find below the responses to the questions raised in your letter.

1. *Is the tap water in Downriver communities currently safe?*

Water produced by the GLWA throughout the taste and odor event meet all federal Safe Drinking Water Act and Michigan Safe Drinking Water Act, 1976 PA 399, as amended (SDWA), regulatory standards. The Michigan Department of Environmental Quality (MDEQ) continues to work with the GLWA to ensure water continues to meet all SDWA standards. In addition, the GLWA has been conducting expanded (nonregulatory) testing to further ensure the water is safe. All test results received have met the SDWA standards.

2. *To the best of your knowledge, what is the source of the discoloration and odor issues that are currently present in the water?*

The routine cleaning of sedimentation basins at the Southwest Water Treatment Plant resulted in some particulates and the odorous compounds (often associated with the material that has been removed from the water during treatment) to recirculate to the beginning of the treatment process and be fully re-treated through the plant.

3. *What strategy is the Michigan Department of Environmental Quality (MDEQ) and the Great Lakes Water Authority (GLWA) pursuing to address the discoloration and odor issues? How long are these conditions expected to persist?*

The conditions appear to have ended on January 18, 2017, but the GLWA continues to conduct additional sampling as well as customer outreach to respond to any remaining concerns.

4. *It is my understanding the Great Lakes Water Authority has increased sampling and testing of the water in Downriver communities following these reports. How long will this increased testing occur? Have there been any positive tests for bacteria or volatile organic chemicals? How often is water normally tested in the absence of an emergency or adverse reports from the community?*

Enclosed are sample results submitted to the MDEQ that identify the scope and range of the monitoring that has been performed. Water testing frequencies vary depending upon the nature, location, and regulatory requirements or operational needs. Some testing at the treatment plant may be continuous (turbidity, chlorine residuals, etc.) or hourly, some may be conducted every shift or once a day; sampling in the distribution system is often conducted daily but from different sites on a rotating basis; some parameters less frequently but at least as often as required by state or federal regulations.

5. *Increased transparency will help promote public confidence that everything possible is being done to address the situation. Publicly releasing test results as they come in, regardless of whether they contain evidence of contamination or not, would bring peace of mind to many residents. Will results from testing the water be released to the public?*

Yes. Again, enclosed are summaries of the data provided to the MDEQ from the expanded testing conducted in the customer communities.

6. *Our office has received many reports of both people and their pets becoming ill after drinking the discolored water. What should residents who have become sick from ingesting the water be doing to ensure their health is provided for? Where should they go to report these cases? How can we all work together with the appropriate public health authorities to ensure these cases are being properly tracked?*

There are disease surveillance and reporting requirements established for medical professionals through a system established by the Centers for Disease Control and Prevention (CDC) and administered by the state and local health departments. The Michigan Department of Health and Human Services (MDHHS) and the Wayne County Department of Health, Veterans and Community Wellness administer the disease reporting network. Residents should report any illnesses as a result of the water to the Detroit Health Department or Wayne County Department of Health, Veterans and Community Wellness.

Detroit Health Department
City of Detroit
3245 East Jefferson Avenue, Suite 100
Detroit, Michigan 48207
Telephone: 313-876-4000

Wayne County Disease Control and Surveillance
33030 Van Born
Wayne, Michigan 48184
Telephone: 734-727-7078

The MDHHS and city of Detroit are working together to ensure that any reports are followed up on at both the state and local level, including the reports that your office forwarded to Governor Snyder's office. Outside of the names your office provided, the MDHHS and Detroit Health Department have received no other complaints or reports of illnesses associated with the water.

Please encourage any of your constituents who may be suffering from an illness that they believe is connected to water quality to contact their local health department right away so that the county and state can follow up with them.

7. *Many residents are wondering if they need to be drinking bottled water because of the current situation. GLWA has indicated that this is not necessary at the moment, but many of my constituents are receiving mixed messages on this issue. Please provide specific information as to why bottled water is or is not needed at this time to help clarify the situation.*

We are unaware of any indication of contamination that would warrant the use of bottled water. A review of the spreadsheets providing the results of widespread monitoring conducted by the GLWA in response to this event reveals they did not have any unacceptable results for total coliform, *E. coli*, chlorine residuals, volatile organic chemicals, etc. Furthermore, the chlorine levels measured throughout the distribution systems in the communities where these complaints originated reveal no significant decrease from what is normally present. If a significant source of contamination had entered the piping network, a drop in the level of disinfectant would be expected. It is this very trait of providing preventative, public health protection that is the basis for public water systems to maintain a measureable amount of chlorine throughout their underground piping system.

Although it is often difficult to be sure the testing that has been conducted is sufficient to identify all possible contaminants, we are satisfied that the rapid identification of the source of these complaints, along with the measures employed by the GLWA to mitigate the consequences of this incident (isolation of the basin, treatment with powdered activated carbon, etc.), provides a high degree of confidence that the monitoring was appropriate to identify any affiliated public health threat.

8. *Whose responsibility is it to notify the public in the instance that the water in a local community is found to be unsafe to drink? Is there a formal plan in place to work with impacted communities and their elected officials if there is a contamination of the water that could cause health issues?*

Public water systems in Michigan are responsible for the proper operation and monitoring of their drinking water to demonstrate compliance with state and federal standards, as well as satisfying customer expectations for water quality that may surpass drinking water standards. They are obligated to conduct routine monitoring and periodic maintenance; to provide operational oversight under the supervision of properly

certified, licensed water operators; and to report the results of these activities to the MDEQ for compliance assurance. When the drinking water is found to be unsafe to drink, the requirement to notify customers and the general public is specified in rule, often with specific timetables established and mandatory health effects language that must be included. The time frames and methods for distributing this information is based on whether the health threat is considered acute (notification within 24 to 48 hours through multimedia sources) or chronic (notification within 30 days [or more in some cases] through direct written communication with each customer). The MDEQ provides templates that may be used by the community to accomplish these mandatory public notices.

Part 23, Emergency Response Plans, of the administrative rules promulgated pursuant to the Michigan Safe Drinking Water Act, establishes the requirement for all community public water systems to prepare an Emergency Response Plan (ERP). This ERP must outline a program for the rapid correction of emergencies and shall include actions, procedures, and an identification of equipment that can lessen the impact of an emergency on the public health and safety and supply of drinking water systems. Some of the requirements for an ERP are identification of procedures to be implemented, such as emergency treatment measures in the event of contamination, and water sampling and monitoring plans to identify potential public health threats. The ERP must also provide internal and external communication procedures, including appropriate means for notification of customers affected by an emergency, a description of the precautions or measures to be taken to protect the public health of those customers, and a list of critical customers for whom a continuous supply of safe drinking water is most urgent. Communities are required to periodically update their ERP and have it approved by the MDEQ to ensure it addresses the required elements.

Thank you for your interest in assuring safe drinking water for the residents of Southeast Michigan. If you have questions, please contact Mr. Bryce Feighner, Division Director, Drinking Water and Municipal Assistance Division, at 517-284-6544; feighnerb@michigan.gov; or MDEQ, P.O. Box 30241, Lansing, Michigan 48909-7741; or you may contact me.

Sincerely,

C. Heidi Grether

C. Heidi Grether
Director
517-284-6700

Enclosure

cc/enc: Governor Rick Snyder
Senator Ian Conyers
Senator Hoon-Yung Hopgood
Senator Coleman Young II
Representative Darrin Camilleri
Representative Cara Clemente
Representative Erika Geiss
Representative Frank Liberati
Mayor Jonathan Dropiewski, City of Flat Rock
Mayor James Gorris, City of Gibraltar
Mayor Thomas Karnes, City of Lincoln Park
Mayor Joseph Kuspa, City of Southgate
Mayor William Matakas, City of Allen Park
Mayor Pat Odette, City of Woodhaven
Mayor Joseph Pederson, City of Wyandotte
Mayor Rick Sollars, City of Taylor
Mayor Kyle Stack, City of Trenton
Mayor Andrew Swift, City of Riverview
Mr. Andy Linko, Supervisor, Brownstown Township
Mr. Brian Loftus, Supervisor, Grosse Ile Township
Mr. Robert Kaplan, Acting Regional Administrator, U.S. Environmental Protection Agency, Region 5
Ms. Sue McCormick, Chief Executive Officer, GLWA
Dr. Mouhanad Hammami, Director, Wayne County Department of Health, Veterans and Community Wellness
Mr. Jim Perry, Executive Director, Downriver Community Conference
Eden Wells, M.D., MPH, FACPM, Chief Medical Executive, MDHHS
Mr. Bill McBride, Governor's Washington Office
Ms. Maggie Pallone, External Relations Deputy Director, MDEQ
Mr. Robert Wagner, Environment Deputy Director, MDEQ
Mr. Michael Shore, Director of Media Relations, MDEQ
Mr. Bryce Feighner, MDEQ
Mr. Richard Benzie, MDEQ

GLWA
Great Lakes Water Authority

WATER OPERATING SERVICES
WATER QUALITY
10100 E JEFFERSON AVENUE
DETROIT, MICHIGAN 48214

Certified Laboratory No.: 1805

Town Name	Sample Date	Sample Point	Lab No.	Chlorine Residual (mg/L)	Total Coliform	*E. coli*	Fluoride (mg/L)	Turbidity (NTU)	Toxicity	Temp. (°C)	Dissolved Oxygen (mg/L)	pH	Specific Conductance (µS/cm)	Phenolphthalien Alkalinity (mg/L)	Total Alkalinity (mg/L)	*Ortho* - Phosphate (mg/L)	Hardness (mg/L)	Color	Odor	Sulfide (µg/L)	Hydrogen Sulfide (µg/L)	TTHM (µg/L)
Allen Park	01/11/2017	3	1	0.26	ND	ND																
Allen Park	01/11/2017	4	2	1.32	ND	ND																
Allen Park	01/11/2017	8	3	1.15	ND	ND																
Allen Park	01/11/2017	7	4	1.01	ND	ND																
Allen Park	01/11/2017	Allen Park H. School 19000 Champaign	201	0.54	ND	ND	0.43	0.56														
Allen Park	01/11/2017	Lindemana School 9201 Carter	202	1.06	ND	ND	0.44	0.41														
Allen Park	01/12/2017	7	1	0.88	ND	ND			ND													
Allen Park	01/12/2017	4	2	0.87	ND	ND																
Allen Park	01/12/2017	8	3	0.68	ND	ND																
Allen Park	01/12/2017	3	4	0.13	ND	ND																
Allen Park	01/12/2017	2	5	0.11	ND	ND																
Taylor	01/12/2017	32	28	0.70	ND	ND	0.43	0.37						0	76		124	0	sulfur or rubber			
Taylor	01/12/2017	20	29	0.69	ND	ND																
Taylor	01/12/2017	10	30	0.75	ND	ND																
Taylor	01/12/2017	21	31	0.63	ND	ND																
Taylor	01/12/2017	1	32	0.93	ND	ND																
Lincoln Park	01/12/2017	1	33	0.86	ND	ND																
Lincoln Park	01/12/2017	4	34	0.82	ND	ND	0.41	0.36						0	70		130	0	sulfur			
Lincoln Park	01/12/2017	12	35	0.77	ND	ND																
Lincoln Park	01/12/2017	2	36	0.41	ND	ND																
Garden City	01/12/2017	6	37	0.50	ND	ND	0.42	0.47	ND													
Garden City	01/12/2017	8	38	0.86	ND	ND																
Woodhaven	01/12/2017	1	47	0.50	ND	ND	0.46	0.44						0	84		130	0	sulfur			
Woodhaven	01/12/2017	3	48	0.82	ND	ND																
Southgate	01/12/2017	8	49	0.80	ND	ND																
Southgate	01/12/2017	5	50	0.94	ND	ND	0.45	0.36						0	70		120	0	sulfur			
Southgate	01/12/2017	4	51	0.93	ND	ND																
Southgate	01/12/2017	10	52	0.71	ND	ND																
Detroit	01/12/2017	30	53	0.81	ND	ND	0.51	0.56						0	70		110	0	chlorine			
Detroit	01/12/2017	36	54	1.16	ND	ND																
Melvindale	01/12/2017	3	55	0.90	ND	ND	0.42	0.37						0	74		116	0	mild eggy			
Melvindale	01/12/2017	1	56	0.64	ND	ND																
Melvindale	01/12/2017	2	57	0.87	ND	ND																
Allen Park	01/12/2017	Allen Park H. School 19000 Champaign	201	0.62	ND	ND	0.43	0.66						0	60		120	0	musty			
Allen Park	01/12/2017	Lindemana School 9201 Carter	202	0.82	ND	ND	0.40	0.49						0	70		120	0	musty			
Ash Twp.	01/13/2017	2	1	0.86	ND	ND	0.48	0.23	ND										sulfur & chlorine			
Berlin Twp.	01/13/2017	2	2	0.57	ND	ND	0.44	0.28	ND										sulfur & chlorine			
Brownstown Twp.	01/13/2017	1	3	0.89	ND	ND			ND													
Brownstown Twp.	01/13/2017	12	4	0.76	ND	ND	0.46	0.31											sulfur & chlorine			
Ecorse	01/13/2017	9	5	0.65	ND	ND	0.42	0.18	ND										sulfur & chlorine			
Flat Rock	01/13/2017	1	6	0.33	ND	ND	0.43	0.83	ND										sulfur & chlorine			
Gibraltar	01/13/2017	1	7	0.40	ND	ND	0.45	0.65	ND										sulfur & chlorine			
Melvindale	01/13/2017	2	8	0.90	ND	ND	0.43	0.42	ND										sulfur & chlorine			
River Rouge	01/13/2017	5	9	0.94	ND	ND	0.41	0.32	ND										sulfur & chlorine			
Rockwood	01/13/2017	2	10	1.16	ND	ND	0.43	0.24	ND										sulfur & chlorine			
South Rockwood	01/13/2017	4	11	0.62	ND	ND	0.44	0.21	ND										sulfur & chlorine			

ND = NOT DETECTED
mg/L = milligrams per liter
ug/L = micrograms per liter
NTU = Nephelometric Turbidity Unit
uS/cm = microSiemens per centimeter
°C = degrees celsius

Completed by: Patrick Millard, Chemist II, GLWA

WATER OPERATING SERVICES
WATER QUALITY
10100 E JEFFERSON AVENUE
DETROIT, MICHIGAN 48214

Certified Laboratory No.: 1805

Town Name	Sample Date	Sample Point	Lab No.	Chlorine Residual (mg/L)	Total Coliform	*E. coli*	Fluoride (mg/L)	Turbidity (NTU)	Toxicity	Temp. (°C)	Dissolved Oxygen (mg/L)	pH	Specific Conductance (µS/cm)	Phenolphthalien Alkalinity (mg/L)	Total Alkalinity (mg/L)	*Ortho* - Phosphate (mg/L)	Hardness (mg/L)	Color	Odor	Sulfide (µg/L)	Hydrogen Sulfide (µg/L)	TTHM (µg/L)
Dearborn Hgts.	01/13/2017	5	12	0.57	ND	ND			ND													
Lincoln Park	01/13/2017	Electric PS 1140 Montie	13	1.01	ND	ND	0.42	0.32						0	70		110	0	sulfur & Chlorine			
Belleville	01/13/2017	5	14	0.43	ND	ND	0.43	0.61	ND										sulfur & chlorine			
Canton Twp.	01/13/2017	7	15	0.17	ND	ND			ND													
Canton Twp.	01/13/2017	8	16	1.09	ND	ND																
Canton Twp.	01/13/2017	10	17	0.82	ND	ND																
Canton Twp.	01/13/2017	11	18	0.85	ND	ND																
Canton Twp.	01/13/2017	13	19	1.04	ND	ND	0.44	0.62											sulfur & chlorine			
Huron Twp.	01/13/2017	5	20	1.17	ND	ND	0.42	0.33	ND										sulfur & chlorine			
Romulus	01/13/2017	Wick Rd. PS 32280 Wick Rd.	21	1.27	ND	ND	0.41	8.17						0	80		128	0	slight sulfur & Chlorine			
Romulus	01/13/2017	9	22	0.59	ND	ND			ND													
Sumpter Twp.	01/13/2017	4	23	0.71	ND	ND	0.43	0.25	ND										slight sulfur & chlorine			
Van Buren Twp.	01/13/2017	1	24	0.72	ND	ND	0.44	0.24	ND										sulfur & chlorine			
Van Buren Twp.	01/13/2017	5	25	1.10	ND	ND																
Dearborn	01/13/2017	15	27	0.87	ND	ND			ND													
Lincoln Park	01/13/2017	2	28	0.16	ND	ND			ND													
Lincoln Park	01/13/2017	13	29	0.96	ND	ND	0.42	0.81											sulfur & chlorine			
Southgate	01/13/2017	4	30	0.85	ND	ND			ND													
Dearborn	01/13/2017	21	31	0.41	ND	ND			ND													
Dearborn	01/13/2017	20	32	0.84	ND	ND	0.43	0.42											sulfur & chlorine			
Dearborn	01/13/2017	1	33	0.90	ND	ND																
Dearborn	01/13/2017	11	34	0.54	ND	ND																
Grosse Ile	01/13/2017	4	35	0.58	ND	ND	0.43	0.57	ND										sulfur & chlorine			
Riverview	01/13/2017	5	36	0.50	ND	ND	0.43	0.42	ND										sulfur & chlorine			
Dearborn Hgts.	01/13/2017	Ford Rd. PS 26015 Ford Rd.	37	0.88	ND	ND	0.41	0.36						0	72		104	0	Slight sulfur			
Wayne	01/13/2017	Michigan Ave. PS 3445 Barry	38	1.01	ND	ND	0.41	0.61						0	74		110	0	Slight sulfur			
Southgate	01/13/2017	5	39	0.70	ND	ND	0.46	0.28	ND										sulfur & chlorine			
Trenton	01/13/2017	5	40	0.83	ND	ND	0.43	0.63	ND										sulfur & chlorine			
Woodhaven	01/13/2017	3	41	0.92	ND	ND	0.48	0.58	ND										sulfur & chlorine			
Augusta Twp.	01/13/2017	1	42	0.79	ND	ND	0.40	0.55	ND										sulfur & chlorine			
Pittsfield Twp.	01/13/2017	2	43	0.39	ND	ND			ND													
Pittsfield Twp.	01/13/2017	4	44	0.66	ND	ND	0.41	0.33											sulfur & chlorine			
Superior Twp.	01/13/2017	2	45	0.62	ND	ND	0.43	0.19	ND										sulfur & chlorine			
Ypsilanti	01/13/2017	1	46	0.70	ND	ND	0.43	0.81	ND										sulfur & chlorine			
Ypsilanti	01/13/2017	2	47	0.78	ND	ND			ND													
Ypsilanti Twp.	01/13/2017	1	48	0.71	ND	ND	0.45	0.28	ND										sulfur & chlorine			
Ypsilanti Twp.	01/13/2017	7	49	0.35	ND	ND																
Ypsilanti Twp.	01/13/2017	9	50	0.96	ND	ND																
Dearborn Hgts.	01/13/2017	8	51	0.12	ND	ND	0.43	0.32	ND										sulfur & chlorine			
Dearborn Hgts.	01/13/2017	12	52	0.19	ND	ND																
Belleville	01/13/2017	Ypsilanti PS 361 Rawsonville Rd.	53	1.22	ND	ND	0.40	0.26						0	72		112	0	chlorine			
SW WTP	01/13/2017	SW Plant Raw	SWR				0.20	108						0	80		120	gray	sulfur			0.88
SW WTP	01/13/2017	SW Plant Tap	SWT				0.43	0.57						0	60		120	0	sulfur & Chlorine			6.40
Detroit	01/14/2017	1690 S. Deacon	201	1.13			0.40	0.15						0	76		114	0	0			

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Romulus	01/16/2017	13	1	0.87	ND	ND		0.17											Slight sulfur & slight chlorine			11.20
Romulus	01/16/2017	9	2	0.75	ND	ND																
Van Buren Twp.	01/16/2017	8	3	0.99	ND	ND		0.16											0			12.11
Van Buren Twp.	01/16/2017	1	4	0.77	ND	ND																
Taylor	01/16/2017	23	5	1.05	ND	ND		0.16											0			
Taylor	01/16/2017	40	6	0.86	ND	ND																11.23
Brownstown Twp.	01/16/2017	1D	7	0.43	ND	ND		0.18											0			14.00
Grosse Ile	01/16/2017	4	8	0.73	ND	ND		0.21											sligjht chlorine			12.63
Flat Rock	01/16/2017	1	9	0.22	ND	ND		0.45											slight sulfur			23.68
Ash Twp.	01/16/2017	2	10	0.89	ND	ND		0.16											chlorine			17.07
South Rockwood	01/16/2017	1	11	0.92	ND	ND		0.31											0			10.06
Rockwood	01/16/2017	1	12	0.45	ND	ND		0.30											sulfur & chlorine			28.77
Gibraltar	01/16/2017	3	13	0.74	ND	ND		0.18											0			12.27
SW WTP	01/16/2017	SW Plant Raw	SWR																			ND
SW WTP	01/16/2017	SW Plant Tap	SWT							3.0		7.63	224							< 50	< 15	5.06
Lincoln Park	01/16/2017	Electric PS 1140 Montie								5.5		7.13	248							< 50	< 28	6.32
Romulus	01/16/2017	Wick Rd. PS 32280 Wick Rd.								7.2		7.02	236							< 50	< 30	12.26
Van Buren Twp.	01/17/2017	8	22	0.99	ND	ND	0.40	0.19	ND	9.5	14.21	7.10	251	0	84	1.04						
Dearborn Hgts.	01/17/2017	5	23	0.47	ND	ND	0.35	0.47	ND	10.1	15.33	7.00	238	0	84	2.73						
Taylor	01/17/2017	6	24	0.96	ND	ND	0.35	0.17	ND	7.3	13.18	7.06	234	0	96	1.00						
Lincoln Park	01/17/2017	1	25	0.80	ND	ND	0.37	0.33	ND	11.6	12.70	7.02	245	0	80	0.89						
Allen Park	01/17/2017	2	26	0.11	ND	ND	0.31	0.75	ND	13.3	9.64	7.02	317	0	66	0.73						
Riverview	01/17/2017	5	27	0.60	ND	ND	0.32	0.28	ND	14.1	11.83	7.57	277	0	74	0.90						
Trenton	01/17/2017	5	28	0.96	ND	ND	0.39	0.15	ND	9.3	12.77	6.88	230	0	90	1.13						
Woodhaven	01/17/2017	3	29	0.87	ND	ND	0.32	0.23	ND	8.2	13.10	6.77	266	0	88	1.01						
Ecorse	01/17/2017	9	30	0.76	ND	ND	0.40	0.22	ND	12.6	12.23	7.07	244	0	84	1.25						
Melvindale	01/17/2017	1	31	0.74	ND	ND	0.40	0.45	ND	15.9	11.40	7.00	248	0	80	1.19						
River Rouge	01/17/2017	1	32	0.82	ND	ND	0.41	0.18	ND	11.7	12.14	6.90	251	0	90	1.15						
Flat Rock	01/17/2017	1	33	0.46	ND	ND	0.35	0.40	ND	13.9	11.22	7.18	252	0	88	0.92						
Ash Twp.	01/17/2017	2	34	0.79	ND	ND	0.34	0.14	ND	9.8	12.18	7.13	253	0	90	0.92						
South Rockwood	01/17/2017	4	35	0.83	ND	ND	0.45	0.13	ND	13.0	12.09	7.20	243	0	96	0.88						
Rockwood	01/17/2017	1	36	0.52	ND	ND	0.33	0.25	ND	13.2	12.27	7.25	265	0	102	1.11						
Gibraltar	01/17/2017	3	37	0.72	ND	ND	0.36	0.17	ND	9.9	15.20	7.00	246	0	98	0.97						
Brownstown Twp.	01/17/2017	1	38	0.76	ND	ND	0.39	0.20	ND	12	14.26	7.06	243	0	94	0.97				< 50	< 27	
Grosse Ile	01/17/2017	4	39	0.58	ND	ND	0.35	0.19	ND	10	12.98	7.03	235	0	94	1.08				< 50	< 29	
Southgate	01/17/2017	1	40	0.16	ND	ND	0.33	0.19	ND	13	12.49	7.88	306	0	114	1.11				< 50	< 7.4	
Wayne	01/17/2017	5	41	0.66	ND	ND	0.39	0.26	ND	12	13.45	7.00	236	0	96	1.00						
Romulus	01/17/2017	1	42	0.89	ND	ND	0.40	0.31	ND	10	13.56	7.03	230	0	94	0.99						
Lincoln Park	01/17/2017	2090 Goddard	201	0.92	ND	ND	0.38	0.17						0	90		112	0	chlorine			
Augusta Twp.	01/18/2017	1	23	0.79	ND	ND			ND													
Belleville	01/18/2017	7	24	0.84	ND	ND	0.34	0.25	ND													
Huron Twp.	01/18/2017	6	25	0.17	ND	ND			ND													
Pittsfield Twp.	01/18/2017	2	26	0.44	ND	ND			ND													
Pittsfield Twp.	01/18/2017	3	27	0.47	ND	ND																
Sumpter Twp.	01/18/2017	1	28	0.87	ND	ND			ND													
Superior Twp.	01/18/2017	2	29	0.70	ND	ND			ND													
Van Buren Twp.	01/18/2017	1	30	0.80	ND	ND			ND													

ND = NOT DETECTED
mg/L = milligrams per liter
ug/L = micrograms per liter
NTU = Nephelometric Turbidity Unit
uS/cm = microSiemens per centimeter
°C = degrees celsius

Completed by: Patrick Millard, Chemist II, GLWA

GLWA
Great Lakes Water Authority

WATER OPERATING SERVICES
WATER QUALITY
10100 E JEFFERSON AVENUE
DETROIT, MICHIGAN 48214

Certified Laboratory No.: 1805

Town Name	Sample Date	Sample Point	Lab No.	Chlorine Residual (mg/L)	Total Coliform	*E. coli*	Fluoride (mg/L)	Turbidity (NTU)	Toxicity	Temp. (°C)	Dissolved Oxygen (mg/L)	pH	Specific Conductance (µS/cm)	Phenolphthalien Alkalinity (mg/L)	Total Alkalinity (mg/L)	*Ortho* - Phosphate (mg/L)	Hardness (mg/L)	Color	Odor	Sulfide (µg/L)	Hydrogen Sulfide (µg/L)	TTHM (µg/L)
Ypsilanti	01/18/2017	1	31	0.80	ND	ND			ND													
Ypsilanti	01/18/2017	2	32	0.91	ND	ND																
Ypsilanti Twp.	01/18/2017	1	33	0.90	ND	ND			ND													
Ypsilanti Twp.	01/18/2017	7	34	0.19	ND	ND																
Ypsilanti Twp.	01/18/2017	9	35	0.92	ND	ND																
Canton Twp.	01/18/2017	1	36	0.72	ND	ND			ND													
Canton Twp.	01/18/2017	14	37	0.68	ND	ND																
Canton Twp.	01/18/2017	15	38	0.75	ND	ND																
Canton Twp.	01/18/2017	16	39	0.88	ND	ND																
Canton Twp.	01/18/2017	18	40	0.96	ND	ND																
Inkster	01/18/2017	2	41	0.68	ND	ND			ND													
Inkster	01/18/2017	7	42	0.98	ND	ND																
Romulus	01/18/2017	9	43	0.69	ND	ND			ND													
Dearborn	01/18/2017	15	62	0.80	ND	ND			ND													
Dearborn	01/18/2017	17	63	1.05	ND	ND																
Dearborn	01/18/2017	18	64	0.91	ND	ND																
Dearborn	01/18/2017	20	65	1.00	ND	ND																
Dearborn	01/18/2017	21	66	0.12	ND	ND																
Dearborn Hgts.	01/18/2017	2	67	0.98	ND	ND			ND													
Dearborn Hgts.	01/18/2017	3	68	0.28	ND	ND																
Dearborn Hgts.	01/18/2017	10	69	0.50	ND	ND																
Garden City	01/18/2017	3	70	0.93	ND	ND																
Garden City	01/18/2017	6	71	0.70	ND	ND																
Wayne	01/18/2017	3	78	0.61	ND	ND																
Westland	01/18/2017	10	79	0.58	ND	ND																
Westland	01/18/2017	11	80	0.87	ND	ND																
Westland	01/18/2017	14	81	0.87	ND	ND																
Westland	01/18/2017	16	82	0.99	ND	ND																
Westland	01/18/2017	19	83	0.97	ND	ND																
Count	**166**		**Min**	**0.11**	**ND**	**ND**	**0.20**	**0.13**	**ND**	**3.0**	**9.64**	**6.77**	**224**	**0**	**60**	**0.73**	**104**				**Min**	**0.00**
Total Analyses*	**1835**		**Max**	**1.32**	**ND**	**ND**	**0.51**	**108.00**	**ND**	**15.9**	**15.33**	**7.88**	**317**	**0**	**114**	**2.73**	**130**				**Max**	**28.77**
			Avg.	**0.74**	**ND**	**ND**	**0.41**	**1.82**	**ND**	**10.7**	**12.77**	**7.12**	**251**	**0**	**82**	**1.09**	**118**				**Avg.**	**12.26**
																					MCL	***80***

*Includes Ca, SO4, Cl, and 3 corrosivity values that are not available yet.

45@ refers to 45 VOC compounds analyzed

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