



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
DRINKING WATER AND ENVIRONMENTAL HEALTH DIVISION

**LEAD AND COPPER REPORT AND
CONSUMER NOTICE FOR COMMUNITY WATER SUPPLY
FORM A – SUPPLIES WITH LEAD SERVICE LINES**

*Issued under authority of the Michigan Safe Drinking Water Act, 1976 PA 399,
as amended (Act 399), MCL 325.1001 et seq., and the Administrative Rules.*

Failure to submit this information is a violation of Act 399 and may subject the water supply to enforcement penalties.

Administrative Rule R 325.10710d requires water supplies to report lead and copper monitoring information within ten days after the end of the monitoring period. This form may be used to meet this requirement. Form instructions are available on pages 8 - 10. Submit the information to the appropriate Michigan Department of Environment, Great Lakes, and Energy (EGLE) district office.

1. Supply Name: City of Royal Oak
2. County: Oakland 3. WSSN: 05830
4. Population: _____ 5. Monitoring Period: From: 7/1/2020 To: 12/31/2020
6. Minimum # of Samples Required: 120 (60 sites) 7. # of Samples Taken: 136 (68 sites)
8. Name of Certified Laboratory: Paragon Laboratories - EGLE Lab # 9901

9. SAMPLE CRITERIA:

This form is for water supplies collecting <u>some</u> or <u>all</u> lead and copper samples from sites WITH LEAD SERVICE LINES. All other supplies should use Form B.			
Yes	No		
<input checked="" type="checkbox"/>		Are some or all samples from sites WITH lead service lines? If no sites served by a lead service line, STOP and use Form B.	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Did you prioritize sample collection according to the following: <ul style="list-style-type: none">• Tier 1 sites must be used unless insufficient Tier 1 sites available.• If insufficient Tier 1 sites available, then Tier 2 sites must be used.• If insufficient Tier 2 sites, then Tier 3 sites must be used.• If no Tier 1, 2, or 3 sites are available, sites must be representative of plumbing materials typically found throughout the water system.	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Were the same sampling sites used as in the previous monitoring period? If no, explain (attach additional pages if needed): Some homeowners did not want to continue participating, as a result other sites were selected.	
Comments:			

10. SIGNATURE:

Name: Aaron Filipski

Signature:

Title: Director of Public Services and Recreation Phone: 248.246.3313 Date: 1.6.2021

11. TAP SAMPLING DATA

Use additional sheets as needed. Sheet _____ of _____.

Water Supply Name:

WSSN:

SEE ATTACHED

¹ Tier	² Category	Description	¹ Tier	² Category	Description	³ Material	⁴ Tap Type
Tier 1	A*	Single Family w/ lead service line	Tier 2	D*	Multi Family or building w/ lead service line	L* = Lead C = Copper CLS = Copper with lead solder G = Galvanized P = Plastic	K = Kitchen Sink B = Bathroom Sink O = Other (not an option for residential sites)
	B	Single Family w/ interior lead plumbing		E	Multi Family or building w/ interior lead plumbing		
	C	Multi Family Residence (MFR) w/ a LSL*, or lead interior plumbing, if MFRs comprise at least 20% of total service connections.	Tier 3	F	Single Family w/ copper plumbing with lead solder installed before 1988		
	* Use Form A if any samples collected from sites with LSLs to allow reporting of 1 st and 5 th tier results.		Other	OT	If no Tier 1, 2, 3 sites, use sites representative of plumbing commonly found throughout the supply.		

Sample Location		Sample Date	Tier	Bldg	Plmbg	Service	Line	Tap	Type	1st Liter				5th Liter				Max Values (ppb)	
House Number	Street									Pb (mg/L)	Pb (ppb)	Cu (mg/L)	Cu (ppb)	Lab #	Pb (mg/L)	Pb (ppb)	Cu (mg/L)	Cu (ppb)	Lab #
1016 Etowah	11/10/2020 1A	G	K	<0.001	<1.0	0.017	17	3658020001	<0.001	<1.0	0.0075	7.5	3658020002	11/30/2020	0	17			
1610 E Lincoln	11/10/2020 1A	G	K	0.0013	1.3	0.035	35	3658020003	0.0014	1.4	0.0059	5.9	3658020004	11/30/2020	1.4	35			
509 N Connecticut	11/10/2020 1A	G	K	<0.0010	<1.0	0.11	110	3658020005	<0.0010	<1.0	0.042	42	3658020006	11/30/2020	0	110			
823 N Connecticut	11/10/2020 1A	G	K	0.0053	5.3	0.11	110	3658020007	0.033	33	0.016	16	3658020008	11/30/2020	33	110			
1220 N Wilson	11/10/2020 1A	L	K	0.0055	5.5	0.007	7	3658020009	0.013	13	0.0084	8.4	3658020010	11/30/2020	13	8.4			
4167 Arlington	11/10/2020 1A	L	K	0.0013	1.3	0.008	8	3658020011	0.0024	2.4	0.0018	1.8	3658020012	11/30/2020	2.4	8			
1403 Sunset	11/10/2020 1A	G	K	<0.0010	<1.0	0.01	10	3658020013	<0.0010	<1.0	0.0033	3.3	3658020014	11/30/2020	0	10			
1503 N Pleasant	11/10/2020 1A	C	K	<0.0010	<1.0	0.051	51	3658020015	<0.0010	<1.0	0.023	23	3658020016	11/30/2020	0	51			
1036 N Maple	11/10/2020 1A	G	K	<0.0010	<1.0	0.079	79	3658020017	<0.0010	<1.0	0.02	20	3658020018	11/30/2020	0	79			
807 Maxwell	11/10/2020 1A	G	K	<0.0010	<1.0	0.031	31	3658020019	<0.0010	<1.0	0.036	36	3658020020	11/30/2020	0	36			
121 S Maple	11/10/2020 1A	L	K	0.0032	3.2	0.047	47	3658020021	0.001	1	0.0096	9.6	3658020022	11/30/2020	3.2	47			
421 Ninth	11/10/2020 1A	G	K	<0.0010	<1.0	0.011	11	3658020023	<0.0010	<1.0	0.0054	5.4	3658020024	11/30/2020	0	11			
324 W Hudson	11/10/2020 1A	G	K	<0.0010	<1.0	0.042	42	3658020025	<0.0010	<1.0	0.0039	3.9	3658020026	11/30/2020	0	42			
1505 Etowah	11/10/2020 1A	G	K	<0.0010	<1.0	0.066	66	3658020027	<0.0010	<1.0	0.0052	5.2	3658020028	11/30/2020	0	66			
1324 Etowah	11/10/2020 1A	G	K	<0.0010	<1.0	0.062	62	3658020029	<0.0010	<1.0	0.0043	4.3	3658020030	11/30/2020	0	62			
1913 N Connecticut	11/10/2020 1A	L	K	0.0068	6.8	0.027	27	3658020031	0.013	13	0.017	17	3658020032	11/30/2020	13	27			
601 Gardenia	11/10/2020 1A	G	K	<0.0010	<1.0	0.013	13	3658020033	<0.0010	<1.0	0.002	2	3658020034	11/30/2020	0	13			
621 Gardenia	11/11/2020 1A	G	K	<0.0010	<1.0	0.014	14	3658280001	<0.0010	<1.0	0.0052	5.2	3658280002	11/30/2020	0	14			
805 Catalpa	11/12/2020 1A	G	K	<0.0010	<1.0	0.16	160	3658280003	<0.0010	<1.0	0.017	17	3658280004	11/30/2020	0	160			
115 S Pleasant	11/12/2020 1A	G	K	<0.0010	<1.0	0.016	16	3658280005	<0.0010	<1.0	0.0097	9.7	3658280006	11/30/2020	0	16			
723 S Pleasant	11/12/2020 1A	G	K	<0.0010	<1.0	0.087	87	3658280007	<0.0010	<1.0	0.0076	7.6	3658280008	11/30/2020	0	87			
328 W Hudson	11/12/2020 1A	G	K	<0.0010	<1.0	0.0061	6.1	3658280009	<0.0010	<1.0	0.042	42	3658280010	11/30/2020	0	42			
1119 Longfellow	11/11/2020 1A	G	K	<0.0010	<1.0	0.069	69	3658280011	<0.0010	<1.0	0.06	60	3658280012	11/30/2020	0	69			
1515 Longfellow	11/11/2020 1A	G	K	<0.0010	<1.0	0.0022	2.2	3658280013	<0.0010	<1.0	0.0075	7.5	3658280014	11/30/2020	0	7.5			
1415 Etowah	11/11/2020 1A	G	K	<0.0010	<1.0	0.012	12	3658280015	<0.0010	<1.0	0.009	9	3658280016	11/30/2020	0	12			
1117 Etowah	11/11/2020 1A	L	K	<0.0010	<1.0	0.012	12	3658280017	<0.0010	<1.0	0.0031	3.1	3658280018	11/30/2020	0	12			
1122 E Lincoln	11/10/2020 1A	G	K	<0.0010	<1.0	0.0052	5.2	3658280019	<0.0010	<1.0	0.0066	6.6	3658280020	11/30/2020	0	6.6			
135 N Connecticut	11/11/2020 1A	L	K	<0.0010	<1.0	0.12	120	3658280021	<0.0010	<1.0	0.041	41	3658280022	11/30/2020	0	120			
1413 Ferris	11/11/2020 1A	L	K	0.0053	5.3	0.03	30	3658280023	0.012	12	0.068	68	3658280024	11/30/2020	12	68			
1907 N Connecticut	11/11/2020 1A	L	K	0.0021	2.1	0.019	19	3658280025	0.012	12	0.0029	2.9	3658280026	11/30/2020	12	19			
1513 Gardenia	11/11/2020 1A	L	K	0.0028	2.8	0.13	130	3658280027	0.0075	7.5	0.0095	9.5	3658280028	11/30/2020	7.5	130			
627 S Blair	11/11/2020 1A	L	K	0.0023	2.3	0.052	52	3658280029	0.0068	6.8	0.12	120	3658280030	11/30/2020	6.8	120			
302 Gardenia	11/11/2020 1A	G	K	<0.0010	<1.0	0.1	100	3658280031	<0.0010	<1.0	0.012	12	3658280032	11/30/2020	0	100			
2119 N Washington	11/11/2020 1A	L	K	<0.0010	<1.0	0.0065	6.5	3658280033	<0.0010	<1.0	0.0024	2.4	3658280034	11/30/2020	0	6.5			
213 W 12 Mile	11/11/2020 1A	G	K	<0.0010	<1.0	0.1	100	3658280035	<0.0010	<1.0	0.016	16	3658280036	11/30/2020	0	100			
404 Gardenia	11/11/2020 1A	G	K	<0.0010	<1.0	0.056	56	3658280037	<0.0010	<1.0	0.005	5	3658280038	11/30/2020	0	56			
618 Gardenia	11/11/2020 1A	L	K	<0.0010	<1.0	0.03	30	3658280039	<0.0010	<1.0	0.0039	3.9	3658280040	11/30/2020	0	30			
700 N Dorchester	11/12/2020 1A	G	K	<0.0010	<1.0	0.31	310	3658280041	<0.0010	<1.0	0.035	35	3658280042	11/30/2020	0	310			
831 N Connecticut	11/11/2020 1A	L	O	0.0026	2.6	0.23	230	3658280043	0.026	26	0.066	66	3658280044	11/30/2020	26	230			
1712 W Houstonia	11/12/2020 1A	G	K	<0.0010	<1.0	0.062	62	3658280045	<0.0010	<1.0	0.38	380	3658280046	11/30/2020	0	380			
1917 W Houstonia	11/12/2020 1A	G	K	<0.0010	<1.0	0.023	23	3658280047	<0.0010	<1.0	0.062	62	3658280048	11/30/2020	0	62			
413 N Connecticut	11/11/2020 1A	G	K	<0.0010	<1.0	0.086	86	3658280049	<0.0010	<1.0	0.013	13	3658280050	11/30/2020	0	86			
810 N Connecticut	11/11/2020 1A	L	K	0.0033	3.3	0.086	86	3658280051	0.021	21	0.01	10	3658280052	11/30/2020	21	86			
626 S Pleasant	11/11/2020 1A	G	K	<0.0010	<1.0	0.014	14	3658280053	<0.0010	<1.0	0.035	35	3658280054	11/30/2020	0	35			
1601 Gardenia	11/12/2020 1A	L	K	0.0019	1.9	0.075	75	3658280055	0.014	14	0.0051	5.1	3658280056	11/30/2020	14	75			
1700 N Blair	11/12/2020 1A	L	K	<0.0010	<1.0	0.0072	7.2	3658280057	<0.0010	<1.0	0.015	15	3658280058	11/30/2020	0	15			
2408 Galpin	11/12/2020 1A	G	K	<0.0010	<1.0	0.083	83	3658280059	<0.0010	<1.0	0.037	37	3658280060	11/30/2020	0	83			
25450 York	11/12/2020 1A	G	K	<0.0010	<1.0	0.045	45	3658280061	<0.0010	<1.0	0.014	14	3658280062	11/30/2020	0	45			
906 Etowah	11/12/2020 1A	G	K	<0.0010	<1.0	0.29	290	3658280063	<0.0010	<1.0	0.015	15	3658280064	11/30/2020	0	290			
1027 Etowah	11/11/2020 1A	G	K	<0.0010	<1.0	0.088	88	3658280065	<0.0010	<1.0	0.042	42	3658280066	11/30/2020	0	88			
2217 Rowland	11/12/2020 1A	G	K	<0.0010	<1.0	0.0095	9.5	3658280067	<0.0010	<1.0	0.0072	7.2	3658280068	11/30/2020	0	9.5			
535 E Windemere	11/13/2020 1A	L	K	0.0025	2.5	0.018	18	3658690001	0.0037	3.7	0.003	3	3658690002	11/30/2020	3.7	18			
232 Gardenia	11/13/2020 1A	G	K	<0.0010	<1.0	0.017	17	3658690003	<0.0010	<1.0	0.0032	3.2	3658690004	11/30/2020	0	17			
706 N Connecticut	11/12/2020 1A	L	K	<0.0010	<1.0	0.091	91	3658690005	<0.0010	<1.0	0.13	130	3658690006	11/30/2020	0	130			
1203 N Blair	11/12/2020 1A	L	B	0.0029	2.9	0.11	110	3658690007	0.013	13	0.017	17	3658690008	11/30/2020	13	110			
1617 N Blair	11/13/2020 1A	L	K	<0.0010	<1.0	0.096	96	3658690009	<0.0010	<1.0	0.011	11	3658690010	11/30/2020	0	96			
1407 N Blair	11/13/2020 1A	L	K	<0.0010	<1.0	0.11	110	3658690011	<0.0010	<1.0	0.062	62	3658690012	11/30/2020	0	110			
1014 E Second	11/12/2020 1A	G	K	<0.0010	<1.0	0.34	340	3658690013	<0.0010	<1.0	0.068	68	3658690014	11/30/2020	0	340			
738 S Pleasant	11/13/2020 1A	G																	

206 S Pleasant	11/13/2020 1A	L	K	0.0019	1.9	0.008	8	3658690017	<0.0010	<1.0	0.0028	2.8	3658690018	11/30/2020	1.9	8
419 Park	11/12/2020 1A	L	K	<0.0010	<1.0	0.0049	4.9	3658690019	0.0041	4.1	0.0053	5.3	3658690020	11/30/2020	4.1	5.3
1516 W Houstonia	11/13/2020 1A	G	K	<0.0010	<1.0	0.48	480	3658690021	<0.0010	<1.0	0.44	440	3658690022	11/30/2020	0	480
1523 W Houstonia	11/13/2020 1A	G	K	<0.0010	<1.0	0.26	260	3658690023	<0.0010	<1.0	0.097	97	3658690024	11/30/2020	0	260
1819 W Houstonia	11/12/2020 1A	G	B	<0.0010	<1.0	0.071	71	3658690025	<0.0010	<1.0	0.076	76	3658690026	11/30/2020	0	76
1839 W Houstonia	11/12/2020 1A	G	B	<0.0010	<1.0	0.24	240	3658690027	<0.0010	<1.0	0.37	370	3658690028	11/30/2020	0	370
1320 N Blair	12/29/2020 1A	G	K	0.003	3	0.019	19	3666580001	0.0016	1.6	0.0042	4.2	3666580002	1/6/2021	3	19
412 Rhode Island	12/28/2020 1A	G	K	<0.0010	<1.0	0.044	44	3666580003	<0.0010	<1.0	0.012	12	3666580004	1/6/2021	0	44
505 Mount Vernon	12/28/2020 1A	G	K	<0.0010	<1.0	0.049	49	3666580005	<0.0010	<1.0	0.0036	3.6	3666580006	1/6/2021	0	49

CONSUMER NOTICE OF LEAD AND COPPER RESULTS REQUIREMENTS AND CERTIFICATION

Each community water supply must deliver a Consumer Notice of Lead and Copper Results (Consumer Notice) to the occupants at each location sampled within 30 days of learning the sample results as required under R 325.10410(5) of the administrative rules promulgated under the Michigan Safe Drinking Water Act, 1976 PA 399, as amended. Failure to deliver the Consumer Notice to each location on time will result in a reporting violation.

Instructions:

A. Use the Consumer Notice Form A template for sites with lead service lines or Consumer Notice Form B template for sites without lead service lines. See the examples on Page 10 to document results from both sites with a lead service line and without a lead service line.

B. Complete one Consumer Notice for each home or building that was sampled. **MAKE SURE UNITS ARE CORRECT BEFORE DISTRIBUTING TO CONSUMERS.**

Note: 1 mg/L = 1 ppm = 1,000 ppb Example: 0.002 mg/L = 0.002 ppm = 2 ppb

- C. Mail or hand deliver each Consumer Notice to the corresponding home or building sampled.
- D. Water supplies have 90 days after the end of the monitoring period to submit a sample copy of the Consumer Notice along with a signed certification that notices have been distributed as required under R 325.10710d(f)(3) to the appropriate EGLE district office. When possible, EGLE encourages water supplies to send the sample Consumer Notice and certification (page 4 of this document) along with the Lead and Copper Report (pages 1 and 2 of this document), which is due within ten days after the end of the monitoring period. Please COMPLETE all forms accurately to avoid resubmittal.

Certification:

I hereby certify that the Consumer Notice of Lead and Copper Results (Consumer Notice) has been provided to persons served at each of the taps that were tested, including all the following information:

- Delivery was by mail, hand delivery, or another method approved by EGLE.
- Delivery was within 30 days of knowing the result.
- Consumer Notice includes required content:
 - The results of lead and copper tap monitoring for the site that was sampled.
 - An explanation of the health effects of lead and copper.
 - Steps consumers can take to reduce exposure to lead in drinking water.
 - Contact information for the public water supply.
 - The maximum contaminant level goal and the action level for lead and copper with the definitions explaining each.

Please initial each line verifying that each requirement was completed:

A Consumer Notice was sent to persons served at each of the taps that were tested.

Delivery was by mail, hand delivery, or another method approved by EGLE.

Each Consumer Notice was delivered to the resident within 30 days of knowing the results.

Each Consumer Notice included the required content as stated above.

A sample copy of a Consumer Notice sent to a resident is attached.



Signature

Director of Public Services and Recreation

1.6.2021

Title

Date

CONSUMER NOTICE OF LEAD AND COPPER RESULTS IN DRINKING WATER

SITE WITH A LEAD SERVICE LINE

Water Supply Name: City of Royal Oak
 County: Oakland WSSN: 5830
 Sample Location: _____ Date Sampled: _____

Thank you for participating in the lead and copper monitoring of drinking water. The levels of lead and copper found at your location are in the table below. Your home's water service line is composed of lead or materials such as galvanized steel, which can contain lead. This means that the pipe that brings water to your home contains lead. The first liter sample represents the water you are likely to drink when turning on the tap, and the fifth liter sample likely represents the water in the service line.

Contaminant	Action Level	Maximum Contaminant Level Goal	1 st Liter Result	5 th Liter Result
Lead (ppb)	15	0		
Copper (ppb)	1300	1300		

SAVE

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Maximum Contaminant Level Goal (MCLG): 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.

ppb: Parts per billion or micrograms per liter.

ND: Not detected.

To reduce exposure to lead and copper in drinking water:

- **Run your water before drinking.** The more time water has been sitting in your home's pipes, the more lead it may contain. Therefore, if your water has not been used for several hours, run the water before using it for drinking or cooking. This flushes lead-containing water from the pipes. Additional flushing may be required for homes that have been vacant or have a longer service line.
 - If you **do not** have a lead service line, run the water for 30 seconds to two minutes, or until it becomes cold or reaches a steady temperature.
 - If you **do** have a lead service line, run the water for at least five minutes to flush water from both the interior building plumbing and the lead service line.
- **Use cold water for drinking, cooking, and preparing baby formula.** Do not cook with or drink water from the hot water tap. Lead and copper dissolves more easily in hot water.
- **Do not boil water to remove lead and copper.** Boiling water will not reduce lead and copper levels.
- **Consider using a filter to reduce lead in drinking water.** Read the package to be sure the filter is NSF 53 certified to reduce lead or contact NSF International at 800-NSF-8010, or www.nsf.org for more information.
- **Consider purchasing bottled water.** The bottled water standard for lead is 5 ppb.
- **Identify older plumbing fixtures that likely contain lead.** Older faucets, fittings, and valves sold before 2014 may contain higher levels of lead, even if marked "lead-free." Faucets, fittings, and valves sold after January 2014 are required to meet a more restrictive "lead-free" definition but may still contain up to 0.25 percent lead.
- **Clean your aerator.** As part of routine maintenance, the aerator should be removed at least every six months to rinse out any debris that may include particulate lead.
- **Get your child tested.** Contact your local health department or healthcare provider to find out how you can get your child tested for lead if you are concerned about exposure.

Lead can cause serious health and developmental problems. It can cause damage to the brain and kidneys, and it can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development. Although other sources of lead exposure exist, such as lead paint, and lead contaminated dust, your water supply is contacting you to reduce your risk of exposure to lead in drinking water. If you have questions about other sources of lead exposure, please contact your local health department.

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

The United States Environmental Protection Agency (U.S. EPA) estimates that 20 percent or more of human exposure to lead may come from drinking water. Infants who consume mostly mixed formula can receive 40 percent to 60 percent of their exposure to lead from drinking water.

For more information on reducing lead exposure around your home and the health effects of lead, visit the U.S. EPA's website at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider.

For more information on copper, visit the United States Center for Disease Control website at www.atsdr.cdc.gov/index.html, or contact your health provider.

What do I do now? What's the City of Royal Oak doing about lead service lines?

Even if the lead and copper concentrations in your samples didn't exceed 'action levels', it's always good practice to follow the exposure reduction advice provided. That's because there are no safe levels of lead in drinking water.

Currently, we are building our comprehensive inventory to know precisely how many there are, but we estimate there may be as many as 1,400 within the system. Because you've participated in this program, we've recorded the service line material for your home, and that helps us complete this count.

The City of Royal Oak is planning to replace all of these lead and galvanized steel services at a rate of about 100 per year. There is not an established waiting list for these replacements, however if your home had a result that exceeded the action level during this round of testing, you will be given priority consideration. The city will reach out to eligible homes directly during project planning.

It's important to remember that these service lines aren't the only potential source of lead. Older plumbing fixtures - even some manufactured as recently as 2014 and labeled "lead-free" - many still contain lead. Trapped particulate in aerators is another common source, so be sure to clean those regularly.

Additional resources:

- State of Michigan - Mi Lead Safe - www.michigan.gov/mileadsafe
- US EPA - Consumer Lead Guidance - www.epa.gov/lead
- City of Royal Oak - Lead Testing Page - www.romi.gov/leadtesting