STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

C. HEIDI GRETHER
DIRECTOR

October 22, 2018

VIA E-MAIL and U.S. MAIL

Mr. Darwin Watson
City of Benton Harbor
200 Wall Street
Benton Harbor, Michigan 49022

WSSN: 0600
Supply: Benton Harbor
County: Berrien

Dear Mr. Watson:

SUBJECT: Lead and Copper Monitoring - Action Level (AL) Exceedance

The city of Benton Harbor community water supply's ninetieth percentile exceeded the AL for lead during the most recent round of lead and copper monitoring of drinking water taps from June 1, 2018, through September 30, 2018, as summarized below.

Contaminant	AL	MCLG*	90th Percentile Value	Number of Samples Above AL	Range of Sample Results	Typical Source of Contaminant
Lead	15 parts per billion (ppb)	0	22	8	0 ppb - 60 ppb	Corrosion of household plumbing systems; Service lines that may contain lead; Erosion of natural deposits
Copper	1.3 parts per million (ppm)	1.3	0.1	0	0 ppm - 0.1 ppm	Corrosion of household plumbing systems; Erosion of natural deposits

*MCLG: Maximum contaminant level goal means 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.

An AL exceedance is not a violation, but it triggers other requirements under the administrative rules promulgated under the Michigan Safe Drinking Water Act, 1976 PA 399, as amended (Act 399). Requirements include water quality parameter (WQP) monitoring, source water monitoring, corrosion control treatment, and public education (PE). Please refer to the "Timetable of Upcoming Requirements" for your specific deadline for each of the following requirements.

Issue a Public Advisory

An amendment to Act 399 on March 29, 2017, requires a public water supply to issue a Public Advisory (PA) within three business days to inform all persons served about the lead AL exceedance. It is the intent of the Department of Environmental Quality (DEQ) to work with you to develop the PA materials to ensure it complies with the requirements set forth in Act 399. Enclosed with this letter is a checklist to document the PA

distribution activities. Please contact the DEQ if you plan to use broadcast media as your delivery method.

Deliver Consumer Notice of Lead and Copper Results
Within 30 days of learning the results, you must provide individual lead and copper tap results to the people who receive water from sites that were sampled, even if lead and copper were not detected. You must also send us certification that you met all delivery requirements along with a sample copy of your consumer notice 90 days after the end of the monitoring period. To download the *Lead and Copper Report and Consumer Notice of Lead and Copper Results Certificate* in Microsoft Word or PDF format, visit http://michigan.gov/deq. Click on Water, Drinking Water, Community Water Supply, and Reporting Forms.

Distribute PE
Sixty days after the end of the monitoring period that exceeded the AL, deliver PE materials to all consumers. Repeat each year until the lead AL is no longer exceeded. This material is intended to educate consumers about lead health effects, sources, and steps to minimize exposure. Enclosed is a template you may use to meet the requirement. Note that the PE material must include information about the exceedance in your water supply, information about what you are doing to reduce lead levels, information about lead service lines in your distribution system, and information about the history of lead levels in your water supply.

Also attached is a checklist of PE activity requirements with a certification form to return to us, no later than ten days after the PE is due, along with a sample copy of the PE material.

Conduct WQP Monitoring
Six months after the start of the monitoring period that exceeded the AL, collect two sets of Water Quality Parameter (WQP) samples, at least 24 hours apart, from your entry point to the distribution system, TP001 (Treatment Plant Tap), and from ten locations in the distribution system. Essentially, WQP sampling must be done twice from each location (entry point and distribution system locations) within a six-month period but cannot be at the same site on the same day. The WQP samples shall be analyzed for pH, alkalinity, calcium, conductivity, chloride, sulfate and temperature. Temperature and pH are field tests and should be completed at the time of sample collection.

If you use the DEQ laboratory, order bottles by calling 517-335-8184 or by downloading the form EQP 2301 *Bottle Order Form* from http://michigan.gov/deqlab. Click on Drinking Water. The tests are analyzed from one sample bottle per location. Request the analyses using the following test codes:

Test Code	Cost	Bottle Number	Test Description
CORR	$51.00	33	Conductivity, Alkalinity, Phosphate, and Calcium
CPH	$13.00	33	pH Determination
R	$18.00	32,33	Chloride, Sulfate

Conduct Source Water Monitoring
By November 30, 2018, collect one set of WQP samples from a source water tap that is representative of raw water before treatment. If you need assistance determining the appropriate sampling point, please contact your District Engineer. The samples should be analyzed for all of the parameters above.

Six months after the end of the monitoring period that exceeded the AL, collect one sample for lead and copper at your entry point to the distribution system. Repeat every third year until both lead and copper ALs are met during the entire three-year period.

Correct the Problem
Minimize lead and copper in drinking water by reducing corrosion of water pipes and household plumbing that contain lead and copper. To accomplish this, you must propose a corrosion control treatment plan or propose to perform a corrosion control study by six months after the end of the monitoring period that exceeded the AL. If treatment is found to be necessary, it must be installed and samples collected to ensure the lead and copper ALs are consistently met. Contact us for guidance on corrosion control options.

Lead and Copper Monitoring
To show the ALs can be met, collect lead and copper samples from 60 sites between January 1 and June 30, 2019, and again between July 1 and December 31, 2019.

You may discontinue the corrosion control study and installation of corrosion control treatment if the action levels are met during future rounds of monitoring.

When selecting new sites, choose the highest Tier criteria available within the distribution system, giving Tier 1 sites first priority. Please see the enclosed tiering criteria to help inform your site selection process. Within 30 days of learning of results, provide individual lead tap results to people who receive water from sites that were sampled. If you have Tier 1, or Tier 2 sites, i.e., sites with a lead service line, compliance sampling will require that you collect a 1st liter and 5th liter sample from each sampling location. Specific instructions regarding the 1st and 5th liter sample collection procedures are currently being developed and will be provided before January 1, 2019. Within 30 days of learning of results from the 1st and 5th liter samples, provide individual lead tap results to people who receive water from sites that were sampled. Even if lead

was not detected, all monitoring, reporting, consumer notification, and DEQ certification requirements remain in effect.

Consumer Confidence Report (CCR)
Include this AL exceedance in your CCR, which is due to our office, your customers, and the local health department by July 1, 2019. You may use the table format from the first page of this letter.

Also, because the lead AL was exceeded, include the following health effects language:

> *Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.*

What Happens Next?
If you can show that both lead and copper ALs are met in two consecutive six-month periods, then many of the requirements outlined in this letter will no longer apply.

However, in the meantime, you must propose a corrosion control treatment plan or propose to perform a corrosion control study. If treatment is found to be necessary, it must be installed. We will work with you to complete these corrosion control steps to optimize your corrosion control treatment.

Timetable of Upcoming Requirements

Complete By	Requirement	Comments
Within three business days	Distribute a Public Advisory	Distribute a Public Advisory to inform all persons served by the water supply of the lead AL exceedance. Distribution of the notice must be in a form and manner designed to fit the specific situation and must be reasonably calculated to reach all persons served by the public water supply.
Right away	Deliver *Consumer Notice of Lead and Copper Results* to persons served at each site tested within 30 days of knowing the result.	Download *Lead and Copper Report and Consumer Notice of Lead and Copper Results Certificate* in Microsoft Word or PDF format from http://michigan.gov/deqleadcopper.
November 29, 2018	Perform PE activities including delivering PE materials to all consumers.	PE required activities are listed in enclosed template and checklist. Repeat every year until the lead AL is met in the most recent round of sampling.
November 30, 2018	Collect WQP raw water samples.	Collect one set of WQP samples that are representative of raw water before treatment.
November 30, 2018	Collect WQP samples.	Collect two sets of WQP samples from your entry point to the distribution system. Collect two sets of WQP samples at least 24 hours apart from ten locations in the distribution system. Repeat each lead and copper monitoring period until both ALs are met.

Complete By	Requirement	Comments
December 9, 2018	Send us certification of PE compliance along with a sample copy of the materials delivered.	Sample certification enclosed. Required within ten days of PE distribution.
December 29, 2018	For the Jun-Sep 2018 monitoring, send us certification of consumer notice of lead and copper results compliance along with a sample copy of the notice delivered.	Download *Lead and Copper Report and Consumer Notice of Lead and Copper Results Certificate* in Microsoft Word or PDF format from http://michigan.gov/deqleadcopper.
Between January 1 and June 30, 2019	Collect 60 samples from the distribution system and have them analyzed for lead and copper.	Report the results to the DEQ and deliver the consumer notice of individual lead and copper results using the downloadable *Lead and Copper Report and Consumer Notice of Lead and Copper Results Certificate*. **Report due July 10, 2019.**
Between January 1 and June 30, 2019	Collect WQP samples.	Collect two sets of WQP samples from your entry point to the distribution system. Collect two sets of WQP samples at least 24 hours apart from ten locations in the distribution system. Repeat each lead and copper monitoring period until both ALs are met.
March 31, 2019	Collect one lead and copper sample from your entry point to the distribution system.	Repeat every third year until both ALs are met for the whole three-year period.
March 31, 2019	Submit a proposal for optimal corrosion control treatment or a corrosion control study.	Contact us for guidance on corrosion control options. Corrosion control study and treatment installation may cease if both ALs are met during two consecutive six-month monitoring periods.
July 1, 2019	Report the 2018 AL exceedance in the Consumer Confidence Report.	Specific lead health effects language must be included.
Between July 1 and December 31, 2019	Collect 60 samples from the distribution system and have them analyzed for lead and copper.	Report the results to the DEQ and deliver the consumer notice of individual lead and copper results using the downloadable *Lead and Copper Report and Consumer Notice of Lead and Copper Results Certificate*. **Report due January 10, 2020.**
Between July 1 and December 31, 2019	Collect WQP samples.	Collect two sets of WQP samples from your entry point to the distribution system. Collect two sets of WQP samples at least 24 hours apart from ten locations in the distribution system. Repeat each lead and copper monitoring period until both ALs are met.
September 28, 2019	For the Jan-June 2019 monitoring, send us certification of Consumer Notice of Lead and Copper results compliance along with a sample copy of the notice delivered.	Download *Lead and Copper Report and Consumer Notice of Lead and Copper Results Certificate* in Word or PDF format from http://michigan.gov/deqleadcopper.
March 31, 2020	For the July-Dec 2019 monitoring, send us certification of Consumer Notice of Lead and Copper results compliance along with a sample copy of the notice delivered.	Download *Lead and Copper Report and Consumer Notice of Lead and Copper Results Certificate* in Word or PDF format from http://michigan.gov/deqleadcopper.
March 31, 2022	Collect one lead and copper sample from your entry point to the distribution system.	Repeat every third year until both ALs are met for the whole three-year period.

We recognize that the Lead and Copper Rule is complex and may be confusing. We will continue to offer assistance in implementing these regulations. If you have any questions, please contact us at boltj@michigan.gov; onanb@michigan.gov; or at the phone numbers provided below.

Sincerely,

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Enclosures (Public Advisory Checklist, Public Education Material Template and Sample Certificate, WQP report form, Tier Criteria)
cc/enc: Mr. Mike O'Malley, City of Benton Harbor
Mr. Ernie Sarkipato, Surface Water Specialist, DEQ
Mr. Jeremy Klein, District Analyst, DEQ