



MONITORING PLAN FOR COMMUNITY WATER SUPPLIES – DISINFECTANTS AND DISINFECTION BYPRODUCTS (DDBP)

Issued under authority of 1976 PA 399 and Administrative Rules, as amended.

Administrative Rule R 325.10719i requires a water supply to develop a monitoring plan.

This form is provided by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) as a convenience to the water supply to develop the plan.

Water Supply Information

Supply Name	WSSN
Address	Population Served
City, State, Zip	County

Contacts – Water Supply

Name and Title	Email	() Telephone
Name and Title	Email	() Telephone
Name and Title	Email	() Telephone

Contacts – EGLE and Other

EGLE Drinking Water Analyst Name	Email	() Telephone
EGLE Drinking Water District Engineer Name	Email	() Telephone
Pollution Emergency Alerting System Information (PEAS)		1-800-292-4706
Call PEAS number if unable to contact EGLE staff.		Telephone
Local Official	Email	() Telephone
Local Official	Email	() Telephone
Health Department	Email	() Telephone

Public Notification

Means of Public Notification		
Newspaper Name and City	Email	() Telephone
Radio/Television Name and Address or City	Email	() Telephone

Laboratory

Primary Laboratory Name	Email	() Telephone
Primary Lab Address, City, State, Zip		
Alternate Laboratory Name	Email	() Telephone
Alternate Lab Address, City, State, Zip		

DDBPR Monitoring Plan for WSSN _____(continued)

Measure Chlorine Residual (under normal operating conditions)

- Check if this supply serves water disinfected with chlorine or chloramines. The residual disinfectant level must be measured at the same time and the same location as each total coliform compliance sample (includes all routine AND repeat total coliform samples).

Monitor Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5)

TTHM and HAA5 Sample Sites and Monitoring Frequency

Site Code ¹ (DBP1, DBP2, etc)	Sample Site Address	Rationale for Selection	ROUTINE Monitoring Sample Every <input type="checkbox"/> 3rd Month <input type="checkbox"/> 1 Year	REDUCED Monitoring ² Sample Every <input type="checkbox"/> 3rd Month <input type="checkbox"/> 1 Year <input type="checkbox"/> 3rd Year
DBP__			<input type="checkbox"/> TTHM <input type="checkbox"/> HAA5	<input type="checkbox"/> TTHM <input type="checkbox"/> HAA5
DBP__			<input type="checkbox"/> TTHM <input type="checkbox"/> HAA5	<input type="checkbox"/> TTHM <input type="checkbox"/> HAA5
DBP__			<input type="checkbox"/> TTHM <input type="checkbox"/> HAA5	<input type="checkbox"/> TTHM <input type="checkbox"/> HAA5
DBP__			<input type="checkbox"/> TTHM <input type="checkbox"/> HAA5	<input type="checkbox"/> TTHM <input type="checkbox"/> HAA5
DBP__			<input type="checkbox"/> TTHM <input type="checkbox"/> HAA5	<input type="checkbox"/> TTHM <input type="checkbox"/> HAA5
DBP__			<input type="checkbox"/> TTHM <input type="checkbox"/> HAA5	<input type="checkbox"/> TTHM <input type="checkbox"/> HAA5

¹ Each Site Code is unique to a Sample Site Address. Contact EGLE if a sample site is no longer available. EGLE will help you select a new Sample Site Address and establish a new Site Code.
² Reduced monitoring can only be established after certain criteria are met. Complete this column only after consultation with EGLE. Monitor according to the routine schedule unless a reduced schedule has been approved by EGLE.

Peak historic month: _____ (month of highest byproduct formation, based on past results)

When monitoring:

- Every 1 year or every 3rd year, monitor during the peak historic month.
- Every 3rd month, check the group below that contains the peak historic month. Monitor during each of the months in the group.
 - January, April, July, and October (1st month of each calendar quarter)
 - February, May, August, and November (2nd month of each calendar quarter)
 - March, June, September, and December (3rd month of each calendar quarter)

Monitor Bromate (under normal operating conditions)

- Check if this supply adds ozone. This supply must collect 1 sample per month for bromate at the entry point (plant tap) of each treatment plant that uses ozone. EGLE may reduce frequency from monthly to quarterly if the bromate running annual average (RAA) is <= 0.0025 mg/L (milligrams per liter) (2.5 parts per billion [ppb]).

Schematic (optional)

- Check if a schematic is attached showing the sample sites in this monitoring plan.

TTHM and HAA5 Operational Evaluation

This supply must conduct an operational evaluation if either the TTHM or the HAA5 Operational Evaluation Level (OEL) exceeds the maximum contaminant level (MCL). This supply must submit the written report to the EGLE district office within 90 days after learning the result that causes the OEL to exceed the MCL. The OEL is an estimate of the following quarter's locational running annual average (LRAAs). $OEL = 2 \text{ previous quarters' results} + \text{twice the current quarter result, all divided by 4.}$

TTHM and HAA5 Increased Monitoring

A supply monitoring every year or every 3rd year that has any TTHM or HAA5 result above the MCL must begin collecting dual sample sets every 3rd month at all routine sites. Compliance with the MCL will be determined at the end of four consecutive quarters, including the quarter that triggered increased monitoring.

Sample Site Plan Completed By

_____	_____	_____
Name	Title	Date
_____	_____	()
Signature	Email	Telephone
_____	_____	_____
Water Supply Name	County	WSSN

Compliance Calculation Procedures

See page 4 of this plan.

Compliance Calculation Procedure

General

Where compliance is based on an RAA of monthly or quarterly samples or averages and the supply fails to monitor for TTHM, HAA5, or bromate, this failure will be treated as a monitoring violation for the entire period covered by the RAA.

All samples taken and analyzed from compliance sites must be included in determining compliance, even if that number is greater than the minimum required.

If any individual quarter's average will cause the RAA of that supply to exceed the MCL, the supply is out of compliance at the end of that quarter.

Chlorine

Chlorine maximum residual disinfectant level (MRDL) is 4.0 mg/L.

Compliance with the MRDL is based on an RAA, computed quarterly, of monthly averages of all measurements taken at the same place and time as total coliform compliance samples.

In cases where supplies switch between the use of chlorine and chloramines during the year, compliance will be based on all monitoring results of both chlorine and chloramines.

TTHM and HAA5

TTHM MCL is 0.080mg/L (80 ppb). HAA5 MCL is 0.060 mg/L (60 ppb).

Compliance with each MCL is based on the LRAA for TTHM and HAA5 at each location. If one location is out of compliance with the MCL, then the supply is out of compliance.

If monitoring annually or less frequently and no sample exceeds the MCL, the sample result for each monitoring location is considered the LRAA for that monitoring location. If a sample exceeds the MCL, the supply shall increase monitoring to a dual sample set at each location every 90 days and calculate compliance at the end of four quarters, including the quarter in which the sample exceeded the MCL.

If monitoring quarterly, the LRAA is calculated quarterly using results from each location. If the supply fails to complete four consecutive quarters of monitoring, compliance with the MCL will be based on the average of available data from the most recent four quarters. If the supply takes more than one sample per quarter at a monitoring location, an average of all samples taken in the quarter at that location will be used to determine the LRAA.

The supply is in violation of the MCL when the LRAA exceeds the MCL, based on four consecutive quarters of monitoring, or the LRAA calculated based on fewer than four quarters of data if the MCL would be exceeded regardless of the monitoring results of subsequent quarters. The supply is in violation of the monitoring requirements for each quarter that a result would be used in calculating an LRAA if the supply fails to monitor.

Bromate (for supplies using ozone)

Bromate MCL is 0.010 mg/L (10 ppb).

Compliance is based on an RAA of the most recent four quarters, computed quarterly, of monthly samples (or for months in which the supply takes more than one sample, the average of all samples taken during the month). If the average of samples covering any consecutive four-quarter period exceeds the MCL, the supply is in violation of the MCL and must notify the public, in addition to reporting to EGLE. If a supply fails to complete 12 consecutive months of monitoring, compliance with the MCL for the last four-quarter compliance period is based on an average of the available data.