



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER BUREAU

SAMPLE SITING PLAN - BACTERIOLOGICAL

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

Failure to develop a plan is a violation of the Act and may subject the water supply to enforcement penalties. Administrative Rule R 325.10705 requires a water supply to monitor for total coliform bacteria according to a written sample siting plan subject to department review and revision. This form is provided as a convenience to the water supply to develop the plan.

Water Supply Information

Supply Name	WSSN
Address	
City, State, Zip	County

Water Supply Monitoring Contacts

Name & Title	Telephone
Name & Title	Telephone

Sampling Information

Population Served	Minimum flushing time required before sampling
<i>per month</i>	<i>minutes</i>
Number of Routine Distribution Samples Required Per Month	Minimum chlorine residual required prior to sampling
	<i>mg/L</i>

Contacts

DEQ Name & Title	Telephone
DEQ Name & Title	Telephone
DEQ Name & Title	Telephone
Local Official	Telephone
Local Official	Telephone
Health Department	Telephone
Laboratory - Used Primarily	Telephone
Laboratory - Alternate	Telephone

Public Notification

Means of Public Notification		
Newspaper Name & City	Telephone	Email
Radio / Television Name & Address or City	Telephone	Email

Distribution System Sample Sites

Add additional sheets if needed.

Site #	Address	# of samples/mo	Repeat Sample Upstream Site Address	Repeat Sample Downstream Site Address	Repeat Sample Raw Water Site(s)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

When a distribution sample is positive for total coliform or *E.coli*, collect repeat samples in the distribution system AND at ALL raw water sources (wells). With department approval, source water collection may be limited to those wells that were in use at anytime within the 72 hour period prior to the collection of the original positive sample.

Raw Water, Common Header, Entry Point (Plant Tap), and Other Non-Distribution System Sample Sites

Site #	Well # or Entry Point	Location or Address	# of samples/month
1			
2			
3			
4			
5			

Sample Siting Plan Completed By

Signature

Date

For Official Use Only

Instructions to Develop Sample Siting Plan

1. Choose distribution system sample sites that are representative of water throughout the distribution system. If possible, choose sites where a smooth nonthreaded sampling tap is available or can be installed. A map of all sites listed in the Distribution System Sample Site chart can show that sites are representative of water throughout the distribution system. It is recommended that the Distribution System Sample Sites chart include a few extra sites that can be used as a repeat sample in the event that a routine site is positive for total coliform. Choose these sites using the same criteria used to select routine sites.
2. Update the Sample Siting Plan when population changes or when existing sample sites are no longer representative of water throughout the distribution system.
3. Submit the Sample Siting Plan to the Department of Environmental Quality (DEQ) district office for review and possible revision. Visit www.michigan.gov/deq for contact information and locations.
4. Keep a copy easily accessible to the water operator and available for inspection by the DEQ staff.

Procedure When Sample Result Is POSITIVE

1. If a distribution system sample result is positive for total coliform bacteria or *E.coli*, then collect repeat samples within 24 hours of learning of the positive result from all of the following sites:
 - A. The site of the positive sample result; and
 - B. An upstream site within five service connections of the original positive site; and
 - C. A downstream site within five service connections of the original positive site; and
 - D. Every raw water source (well). With department approval source water collection may be limited to those wells that were in use at anytime within the 72-hour period prior to the collection of the original positive sample.
2. Notify the DEQ district office within 24 hours if more than one distribution system sample result is positive for total coliform bacteria. Supplies that collect more than 40 samples each month must notify the DEQ when greater than 5.0 percent of the sample results are positive for total coliform.
3. Notify the DEQ district office within 24 hours if any sample result is positive for *E.coli*.
4. Collect a minimum of five samples during the next month. Supplies that routinely collect more than five samples are not required to increase frequency, unless directed by the DEQ.

Sample Instructions

1. Remove the aerator, if present.
2. Flush sample tap for a minimum of two minutes.
3. Disinfect sample tap by either using chlorine bleach, or flaming the tap with a torch.
4. Flush sample tap again.
5. Reduce water stream to a modest, nonsplashing flow.
6. If you use a chemical disinfectant you must measure chlorine residual according to your Disinfection Byproduct Rule Monitoring Plan that you submitted to the DEQ. Ensure a chlorine residual is detectable before collecting the bacteriological sample.
7. Remove cap from bottle and hold cap with the inner surface facing downward. Do not set cap down. Dust-like particles in the bottle are a preservative; do not empty out or rinse out this preservative.
8. Fill the bottle. Avoid contact with sample tap or other surfaces. Do not overfill.
9. Recap the sample bottle before turning off the water.
10. Complete the laboratory sample request form and attach it to the sample bottle.
11. Mail or deliver the sample to a laboratory certified by the state to perform bacteriological analyses. Samples must be analyzed within 30 hours of collection. Note that some laboratories are not available to accept samples on Fridays, weekends, holidays, etc.

Monthly Monitoring

1. Collect samples at regular time intervals throughout the month. Water supplies that serve fewer than 4,901 persons may collect all samples on a single day if the samples are from different sites.
2. It is recommended that raw water samples be collected each month. The DEQ may require monitoring of raw water (wells) or from the entry point (plant tap). Raw water samples must be collected within 24 hours of notification of a distribution system total coliform positive result.
3. Failure to collect samples on time or failure to collect the required number of samples will result in a monitoring violation. Two or more monitoring violations within a 12-month period will result in a fine. Notify the DEQ if monitoring was not performed as required.