Bacteriological Sample Siting Plan Guidance For Community Water Systems

Sample Siting Plan



Commonly Used Abbreviations

- RTCR revised total coliform rule
- SSP sample siting plan
- Bacti bacteriological
- CWS community water supply
- TC total coliform
- TC+ total coliform positive
- EC *E. coli*
- EC+ E. coli positive
- TTT treatment technique trigger
- GW groundwater
- RT routine
- RP repeat
- TG triggered





Why Coliform?

- Coliforms are used as indicator organisms
 - Generally not harmful, abundant, and tests are simple and cheap
- TC detection indicates:
 - Environmental <u>or</u> fecal contamination pathway <u>may</u> exist
 - Pathogens <u>may</u> be present
- EC detection indicates:
 - Fecal contamination pathway <u>may</u> exist
 - Pathogens <u>may</u> be present



Purpose Of Coliform Sampling

- Protects public health!
 - Identifying coliform contamination so it cannot persist undetected in the system
 - Find and fix approach to address contamination
 - It's essential to routinely monitor the whole system for coliforms
 - Coliforms can occur anywhere, but may not be found uniformly throughout the system

(1)



Routine Monitoring

Table 1 Total Coliform Monitoring Frequency for Community Water Supplies

Population Served	Minimum Number of Samples Per Month	59,001 to 70,000	70
25 to 1,000 *	1	70,001 to 83,000	80
1,001 to 2,500	2	83,001 to 96,000	90
2,501 to 3,300	3	96,001 to 130,000	100
3,301 to 4,100	4	130,001 to 220,000	120
4,101 to 4,900	5	220,001 to 320,000	150
4,901 to 5,800	6	320,001 to 450,000	180
5,801 to 6,700	7	450.001 to 600.000	210
6,701 to 7,600	8	600.001 to 780.000	240
7,601 to 8,500	9		270
8,501 to 12,900	10	/80,001 to 9/0,000	270
12,901 to 17,200	15	970,001 to 1,230,000	300
17,201 to 21,500	20	1,230,001 to 1,520,000	330
21,501 to 25,000	25	1,520,001 to 1,850,000	360
25,001 to 33,000	30	1,850,001 to 2,270,000	390
33,001 to 41,000	40	2,270,001 to 3,020,000	420
41,001 to 50,000	50	3,020,001 to 3,960,000	450
50,001 to 59,000	60	3,960,001 or more	480

Repeat Monitoring

- If a RT sample is positive, you must collect a set of RPs within 24 hours
 - Minimum of 3 RPs for <u>each</u> positive
 - All RPs must be collected on the same day
- If 1 or more RPs is positive, collect an additional set of RPs within 24 hours
 - Repeat process until TCs are not detected in 1 complete set of RPs <u>or</u> a TTT has been exceeded
 - If trigger is exceeded due to RT sampling, the CWS must still conduct 1 round of RP sampling



Triggered Source Water Monitoring (GW Systems Only)

- For each positive result, the CWS must collect 1 sample from <u>each</u> operating well within 24 hours
- Consecutive systems must notify their wholesaler of the positive result(s) within 24 hours
 - Within 24 hours of being notified, the wholesaler must collect a sample from each of its GW source(s) and have the samples analyzed



Additional Collection & Analysis Reminders

- The minimum number of samples must be collected within <u>each</u> monthly monitoring period
- 30 hour hold time
 - Sample analysis must begin within 30 hours from collection
- Make sure the lab analyzes each TC+ result for EC
- If EC+, supply must notify DEQ within 24 hours





Why Do I Need A Written SSP?

- Tool to identify and document representative points to collect samples
- Aids in quick troubleshooting the cause of positive results
- Anyone can review the plan and know what they're supposed to do
- It's required!



SSP Content Requirements

- CWSs shall develop and follow a written sample siting plan that identifies sampling sites and a sample collection schedule that are <u>representative of water throughout</u> the distribution system
- Plans must include:
 - RT, RP, and TG monitoring information
 - Minimum required number of samples
 - Sample site location addresses
 - Sample collection schedule
 - CWSs must collect samples at regular intervals throughout the month
 - Exception: GW supplies that collect ≤5 samples per month



Additional SSP Reminders

- Plans are subject to DEQ review and revision
- Failure to prepare or follow your SSP is a violation
- Keep plans on-site for use by sampling personnel and for review during sanitary surveys
- Plans should be updated periodically to account for system changes
 - New sources
 - Change in treatment
 - Population changes
 - New building development



Sample Site & Point Selection Guidance



Establishing a Sample Collection Schedule

Example 1

- Required sample number: 10
- Number of RT sites on SSP: 10
- Collection schedule:
 - 5 the 1st week of the month
 - 5 the 3rd week of the month
- REMINDER: Samples must be collected at regular intervals throughout the month



Establishing a Sample Collection Schedule Cont.

Example 2

- Required sample number: 10
- Number of RT sites on SSP: 20
- Collection schedule:
 - 5 the 1st week of the month
 - 5 the 3rd week of the month.
 - Next quarter, follow the same schedule, but rotate which sites are sampled
- REMINDER: Samples must be collected at regular intervals throughout the month



Establishing a Sample Collection Schedule Cont.

Example 3

- Required sample number: 40
- Number of RT sites on SSP: 10
- Collection schedule:
 - 10 samples collected each week of the month
- REMINDER: Samples must be collected at regular intervals throughout the month



Site Map

- Certain areas are more susceptible to bacterial contamination, so it's important to consider:
 - All water sources and their entry points
 - The area served by each water source
 - Treatment facilities
 - Storage tanks and reservoirs
 - Pressure reducing stations
 - Booster pump stations
 - Pressure zones
 - Interconnections and critical valves
 - Pipe material and size
 - Hydrant locations
 - Location of flushing points
 - Dead-end mains
 - Known trouble areas
 - Sampling points





Sites To Consider Sampling

- Sites should be located throughout the system, representing the varying conditions that occur
- It's important to identify potential areas of concern, as they may affect the microbiological water quality

Consider:

- Residential & commercial areas
- Dead-ends, mains, branches, loops, and other piping configurations
- Areas near know and potential hazards (cross connections)
- Areas with long hydraulic retention times
- Areas with low-velocity water movement
- Deteriorating pipes locations
- Sites with different main materials
- And more! See the "Guidance on Bacteriological Site Selection" Handout



Taps To Avoid

Keep in mind, a customer's faucet may not accurately reflect the distribution system, but instead is representative of the customer's personal plumbing, thus each faucet should be carefully examined to ensure suitability.

Avoid:

- Dirty taps
- Faucets that supply areas where bacterial contamination is likely (janitorial or commercial sinks)
- Threaded taps
- Aerated taps, or remove before sampling
- Unprotected outdoor faucets
- Seldom used faucets
- Swing or swivel type
- Leaky or corroded tap

If unavoidable, use good sampling and disinfection techniques.





SSP Form

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY DRINKING WATER AND MUNICIPAL ASSISTANCE DIVISION

EXAMPLE SAMPLE SITING PLAN - BACTERIOLOGICAL

Issued under authority of 1976 PA 300 and Administrative Rules, as amended. Administrative Rule R 325.10704c requires a water supply to monitor for total colform bacteria according to a written sample stilting plan subject to department review and revision. This form is provided as a convenience to the water supply for developing the plan.

Water Supply Information

DEO

Candy Land	09999
Supply Name	WSSN
32 Boardwalk Drive	1,234
Address	Population Served
Parcheesi, MI 54321	Chocolate
City, State, Zip	County

Contacts - Water Supply

Candy Mann / Operator in Charge	CandvMann@CandvLand.com	(555) 867-5309
Name/Title	E-mail	Telephone
James Hasbro / Superintendent	JamesHasbro@clue.com	(555) 987-6543
Name/Title	E-mail	Telephone
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Name/Title	E-mail	Telephone

Contacts - DEQ and Other

RTCR Analyst	@michigan.gov	(517) 555-4444
DEQ Revised Total Coliform Rule Analyst Name	E-mail	Telephone
District Analyst	@michigan.gov	(616) 555-4444
DEQ Drinking Water District Analyst Name	E-mail	Telephone
District Engineer	@michigan.gov	(616) 555-3333
DEQ Drinking Water District Engineer Name	E-mail	Telephone
Pollution Emergency Alerting System Infe	1-800-292-4706	
Call PEAS number if unable to contact DEQ staff.		Telephone
		()
Local Official	E-mail	Telephone
		()
Local Official	E-mail	Telephone
Chocolate County Health Dept.	ChocolateCounty@CCHD.gov	(616) 666-2222
Health Department	E-mail	Telephone

Public Notification

Door-to-door		
Means of Public Notification		
Parker Brothers Gazette - Parcheesi	PBG@newspaper.com	(555) 999-8888
Newspaper Name and City	E-mail	Telephone
Channel 1, WCLUE - Parcheesi	WCLUE@whodunnit.com	(555) 999-6666
Radio/Television Name and Address or City	E-mail	Telephone

This Cover Sheet Updated

2/23/2018 Date Bacteriological Sampling Requirements Collect at least 2 routine samples per month from the routine sites listed below. For a chlorinated system, measure and record the chlorine residual at the same time and place as every routine and repeat sample collected. Results from all routine and repeat sites are used to determine compliance. Results from other sites might not be allowed for compliance. The DEQ recommends a site map. Map enclosed: Yes \square No \square

Distribution System Sample Sites

Dist. Site #	Routine Site Address	# of samples per month	Upstream Site Address*	Downstream Site Address*	Site Code of All Sources That Serve the Routine Site * (Not required for surface water supplies)
1	56 Park Place (library)	1	52 Park Place	3 North Carolina Ave	WL001, WL002
2	17 Battleship Way (fire station)	1	12 Battleship Way	66 Glugglug Lane	WL001, WL002
3					
4					
5					

"When a routine sample is positive for total collform or E.col, collect samples from repeat sites in the distribution system. Groundwater supplies must also sample all raw water sources (wells) for each positive routine sample result. With DEQ 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 routine positive sample. Supplies that purchase their water must notify their water supplier within 24 hours of a positive routine sample result. Surface water supplies are not required to sample their source water.

Source Sample Sites* and Other Non-Distribution Sites (raw water, common header)

Site Coo	e Well # or Other Designation	Location or Address	Comments:
WL00	I Well 1	32 Boardwalk Dr. (wellhouse)	Include any supply-specific information here.
WL00	2 Well 2	32 Boardwalk Dr. (wellhouse)	

* All sources MUST be sampled if a routine distribution sample is positive for total collform or E. coll.

Laboratory Certified to Analyze Bacteriological Samples - for more labs certified in total collform, visit http://www.michigan.gov/deglab.

DEQ Drinking Water Lab	3350 North MLK Blvd, Lansing, MI		(517) 335-8184
Laboratory Name - Primary	Address, City, State, Zip	E-mall	Telephone
24/7 Labs	1 Fantasy Blvd, Bacteriaville, MI	Ideal@perfectworld.com	(555) 666-7777
Laboratory Name - Alternate	Address, City, State, Zip	E-mail	Telephone

Plan Completed/Updated and Reviewed

/ - Fb)		· · · · · · · · · · · · · · · · · · ·	
Candy Mann (and Mann	2/23/2018	For DEQ Use Only	
Name and Signature	Date Completed	Sample site plan reviewed by DEQ.	DEQ Staff: December & Quiter
09999 Candy Land	Chocolate	No revisions necessary.	Date: 2/24/2018
WSSN Water Supply Name	County	Contact DEQ with guestions.	

DEQ Environmental Assistance Center Phone: 1-800-662-9278 Page 2 of 2

www.michigan.gov/deq EQP5950 (Rev. 11/2017)

DEQ Environmental Assistance Center Phone: 1-800-662-9278

Blank SSP Form Located On Web (www.michigan.gov/deq)





MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY DRINKING WATER AND MUNICIPAL ASSISTANCE DIVISION

EXAMPLE SAMPLE SITING PLAN - BACTERIOLOGICAL

Issued under authority of 1976 PA 399 and Administrative Rules, as amended. Administrative Rule R 325.10704c 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 for developing the plan.

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Candy Land	09999
Supply Name	WSSN
32 Boardwalk Drive	1,234
Address	Population Served
Parcheesi, MI 54321	Chocolate
City, State, Zip	County

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Candy Mann / Operator in Charge	CandyMann@CandyLand.com	(555) 867-5309
Name/Title	E-mail	Telephone
James Hasbro / Superintendent	JamesHasbro@clue.com	(555) 987-6543
Name/Title	E-mail	Telephone
/		()
Name/Title	E-mail	Telephone
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District Analyst	@michigan.gov	(616) 555-4444
DEQ Drinking Water District Analyst Name	E-mail	Telephone
District Engineer	@michigan.gov	(616) 555-3333
DEQ Drinking Water District Engineer Name	E-mail	Telephone
Pollution Emergency Alerting System Infor	rmation (PEAS)	1-800-292-4706
Call PEAS number if unable to contact DEQ staff.		Telephone
		()
Local Official	E-mail	Telephone
		()
Local Official	E-mail	Telephone
Chocolate County Health Dept.	ChocolateCounty@CCHD.gov	(616) 666-2222
Health Department	E-mail	Telephone

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Public Notification

Door-to-door

Means of Public Notification

Parker Brothers Gazette - Parcheesi

Newspaper Name and City

Channel 1, WCLUE - Parcheesi

Radio/Television Name and Address or City

PBG@newspaper.com

E-mail

WCLUE@whodunnit.com

E-mail

(555) 999-8888

Telephone

(555) 999-6666

Telephone

This Cover Sheet Updated

2/23/2018

Date

Bacteriological Sampling Requirements Collect at least 2 routine samples per month from the routine sites listed below. For a chlorinated system, measure and record the chlorine residual at the same time and place as every routine and repeat sample collected. Results from all routine and repeat sites are used to determine compliance. Results from other sites might not be allowed for compliance. The DEQ recommends a site map. Map enclosed: Yes No

Distribution System Sample Sites

Dist. Site #	Routine Site Address	# of samples per month	Upstream Site Address*	Downstream Site Address*	Site Code of All Sources That Serve the Routine Site * (Not required for surface water supplies)
1	56 Park Place (library)	1	52 Park Place	3 North Carolina Ave	N/A
2	17 Battleship Way (fire station)	1	12 Battleship Way	66 Glugglug Lane	N/A
3					
4					
5					

* When a routine sample is positive for total coliform or *E.coli*, collect samples from repeat sites in the distribution system. Groundwater supplies must also sample all raw water sources (wells) for each positive routine sample result. With DEQ 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 routine positive sample. Supplies that purchase their water must notify their water supplier within 24 hours of a positive routine sample result. Surface water supplies are not required to sample their source water.







Source Sample Sites* and Other Non-Distribution Sites (raw water, common header)

Site Code	Well # or Other Designation	Location or Address

* All sources MUST be sampled if a routine distribution sample is positive for total coliform or E. coli.

Comments:					
•	Surface water purchased from GLWA.				
•	Sites 1-5 will be collected the 1 st week				
	of the month and sites 6-10 will be				

- collected the 3rd week.
- Site 11, is an alternate





Laboratory Certified to Analyze Bacteriological Samples - for more labs certified in total coliform, visit http://www.michigan.gov/deqlab.

DEQ Drinking Water Lab	3350 North MLK Blvd, Lansing, MI		(517) 335-8184 Telephone
Laboratory Name - Primary	Address, City, State, Zip	E-mail	
24/7 Labs	1 Fantasy Blvd, Bacteriaville, MI	Ideal@perfectworld.com	(555) 666-7777
Laboratory Name - Alternate	Address, City, State, Zip	E-mail	Telephone
Plan Completed/Updated and Review	ved 2/23/2018	For DEO Lise Only	- · · ·
Name and Signature	Date Completed	Sample site plan reviewed by DEQ.	DEQ Staff: Danielle & Quinn
09999 Candy Land WSSN Water Supply Name	Chocolate County	 No revisions necessary. Revisions necessary as indicated. Contact DEQ with questions. 	Date: 2/24/2018



SSP Form Instructions

Examples for Distribution System Sample Sites

- Example 1 (Ex. 1): A groundwater supply collects one routine sample per month. When the routine sample is positive for total coliform or *E. coli*, collect repeat samples in the distribution system from the routine site and its designated upstream and downstream repeat sites. Also collect a sample from each source. Treatment technique requirements and compliance with the *E. coli* MCL are based on all distribution system site results.
- Ex. 2: A groundwater supply collects more than one routine sample per month. When any routine sample is positive for total coliform or *E. coli*, collect repeat samples in the distribution system from each positive routine site and its designated upstream and downstream repeat sites. Also collect a sample from each source for each positive routine sample result. Treatment technique requirements and compliance with the *E. coli* MCL are based on all distribution system site results.
- Ex. 3: A water supply **purchases** its source water and collects one or more routine sample per month. When any routine sample is positive for total coliform or *E*. *coli*, collect repeat samples in the distribution system from each positive routine site and its designated upstream and downstream repeat sites. Notify the seller of water **within 24 hours** that the routine site is positive for total coliform or *E*. *coli*. Treatment technique requirements and compliance with the *E*. *coli* MCL are based on all distribution system site results.
- Ex. 4: A surface water supply collects one or more routine sample per month. When any routine sample is positive for total coliform or *E. coli*, collect repeat samples in the distribution system from the routine site and its designated upstream and downstream repeat sites. No source water monitoring is required. Treatment technique requirements and compliance with the *E. coli* MCL are based on all distribution system site results.

Dist. Site #	Routine Site Address	# of samples per month	Upstream Site Address*	Downstream Site Address*	Site Code of All Sources that Serve the Routine Site * (Not required for surface water supplies)
Ex. 1	120 Park Place	1	135 Park Place	98 Park Place	WL001, WL002, WL003
Ex. 2	120 Park Place	2	135 Park Place	98 Park Place	WL001, WL002, WL003
Ex. 3	120 Park Place	2	135 Park Place	98 Park Place	Notify supplier of water of each positive routine sample result
Ex. 4	120 Park Place	2	135 Park Place	98 Park Place	Not required for surface water supplies

* When a routine sample is positive for total coliform or *E.coli*, collect samples from repeat sites in the distribution system. Groundwater supplies must also sample all raw water sources (wells) for each positive routine sample result. With DEO approval, source water collection may be limited to those wells that were in use at any time within the 72-hour period prior to the collection of the routine positive sample. Supplies that purchase their water must notify their water supplier within 24 hours of a positive routine sample result. Surface water supplies are not required to sample their source

Examples for Source Sample Sites

WL003

Example 1 (Ex. 1): A groundwater supply owns and operates groundwater wells. List the well site code, corresponding well number, and location/address for each groundwater well. Please provide comments regarding standby wells, alternate run schedules, etc.

Ex. 2: A groundwater supply that **purchases** source water. Leave the Source Sample Sites table blank; and include raw water supplier information in the comments. A supply that purchases groundwater must notify the supplier of water within 24 hours of a positive total coliform or *E. coli* routine sample result. The water supplier must collect a sample from each source within 24 hours of notification.

Ex 1: Source Sample Sites* and Other Non-Distribution Sites (raw water, common header) Site Code Well # or Other Designation Location or Address WL001 Well 1 200 Park Place (Well House) WL002 Well 2 200 Park Place (Well House)

200 Park Place (Well House)

* All sources MUST be sampled if a routine distribution sample is positive for total coliform or E. coli.

Well 3

Ex 2: Source Sample Sites* and Other Non-Distribution Sites (raw water, common header)

Site Code	Well # or Other Designation	Location or Address		Comments (example):		
				Supply purchases water from the City of XYZ.		
All sources MUST be sampled if a routine distribution sample is positive for total coliform or E. coli.						

BACTERIOLOGICAL MONITORING INSTRUCTIONS

Instructions to Develop Bacteriological 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. Including a site map with the Sample Siting Plan is strongly encouraged. If approved by the DEQ, list more than the required number of routine sites and describe the procedure in the Comment field, such as, "Collect a sample from either distribution site 1 or site 2, or both, to fulfill the 1 required routine sample promoth." Please note that results from all routine and repeat sites are used to determine compliance. Results from other sites might not be allowed for compliance.
- 2. Indicate repeat sites within five service connections upstream and downstream of the routine site. If approved by the DEQ, list an alternate fixed site that is further than five connections if the site helps the water supply to find the source of contamination. Use the Comment field to explain why the alternate site is indicated, for example, "Upstream repeat site is more than five service connections from the routine site, but is the closest site that is consistently available to sample and the sample tap is known to be clean."
- 3. If your routine lab is not open on weekends, choose an alternate lab that is, in case sampling is required at that time.
- Update the Sample Siting Plan when population changes, when existing sample sites are no longer representative of water throughout the distribution system, when routine or repeat sites become unavailable, or when supply contact information changes.
- Submit the Sample Siting Plan to the DEQ field office for review and possible revision. For field office addresses, visit http://www.michigan.gov/deq and click on Contacts.
- 6. Keep a copy easily accessible to the water operator and available for inspection by the DEQ staff.

Monthly Monitoring

- 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.
- Collect raw water samples each month (recommended). The DEQ may require routine monitoring of raw water (wells) or from the entry point (plant tap). Collect raw water samples within 24 hours after learning of a distribution system routine total coliform positive result.
- Failure to collect all required routine samples in a monitoring period is a violation. Another total coliform monitoring violation in the following 12 months will result in a fine. Notify the DEQ if monitoring was not performed as required.

Sample Instructions

- 1. Remove the aerator, if present.
- 2. Flush sample tap for a minimum of two minutes; allowing the water to reach a constant temperature
- 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, non-splashing flow (pencil width in diameter).
- If your water is chlorinated, measure and record the chlorine residual at the same time and place as every routine and repeat sample collected. Flush the tap until you feel a temperature change, then record the chlorine residual measurement.
- 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.
- Fill the bottle to the shoulder (1/4 inch from the top). 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. Having an alternative laboratory that is available on Fridays, weekends, and holidays is strongly advised.

Procedure When Sample Result is POSITIVE

- 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 original 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) if using groundwater (not applicable to surface water or purchased surface water). 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. A supply that purchases groundwater must notify the supplier of water within 24 hours of a positive total collform or *E. coll* routine sample result.

Note: If approved by the DEQ, when an upstream repeat site is temporarily not available, sample the closest available location to the repeat site that is also upstream of the routine site and similarly for the downstream side.

- Notify the DEQ field office within 24 hours to learn what further action is required when more than one distribution system sample result is positive for total coliform bacteria (or greater than 5.0 percent are positive for supplies that collect more than 40 samples each month.) Follow up action includes a formalized assessment of the water supply.
- Notify the DEQ field office by the end of the day if any sample result is positive for E.coli.







Districts 1-4: Lansing, Saginaw Bay, Jackson, and Southeast MI

Brittany Tack 517-284-6583 TackB@michigan.gov

Districts 5-8: Kalamazoo, Grand Rapids, Cadillac, and Upper Peninsula

John Karnes

517-284-6570

KarnesJ@michigan.gov

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Questions can be sent directly to the district email box, too!