

**STATE OF GEORGIA – ENVIRONMENTAL PROTECTION DIVISION
MICROBIOLOGICAL SAMPLING
SITE PLAN GUIDANCE**

The Total Coliform Rule (TCR) took effect in Georgia on December 23, 1990. The Revised Total Coliform Rule (RTCR) became effective on April 1, 2016. One of the updated requirements for all public water systems (community and non-community) is to revise the site sample plan that was required under the TCR. The purpose for the written sampling site plan is to ensure that samples are collected from points in the distribution system that best represent the quality of water flowing through the system, to identify repeat sampling locations, and to establish the sampling schedule.

After the plan has been developed, it must be regularly updated. It is to be available for review by representatives from the Division. Unless requested, the plan is not to be submitted to the Division.

WHAT SHOULD BE INCLUDED IN THE PLAN:

1. The plan should include basic information about the water system, including but not limited to, the Water System name, WSID#, estimated population served*, frequency of sampling (monthly or quarterly), number of required samples per compliance period, date the plan was generated, and the name and contact information for the person responsible for maintaining the sampling plan.

*The estimated population served should match the number published in Drinking Water Watch (gadrinkingwater.net) for your water system. If you have a question about the published population value, please contact your assigned compliance officer for guidance on calculating the population or discussing an update to the population.

2. The plan must include a map of the distribution system. Exceptions are: very small water systems such as restaurants, day care facilities, office buildings, some small industries, and rest stops.
3. The map should show locations of all distribution water lines, water sources, treatment facilities, storage tanks and sampling sites. Identify each sampling site by street address and by a numeric code, with a brief description of the site. For example, outside tap residence at 201 Main Street, Site #1. The sampling site Numeric Code should begin with the number 1 and be numbered consecutively. The site Numeric Code is to be used to report the sample location when the sample is submitted to the water laboratory.
4. Sampling sites should be located so that they represent all areas of the distribution system. You may wish to include comments on your plan showing the reason(s) for

selecting each site, such as population density of residential areas, industrial areas, pressure zones, areas vulnerable to potential contamination, pump stations, dead end lines, and purchased source entry points. Do NOT use the raw water tap at any of the sources as sampling sites for routine or repeat coliform sampling as these are triggered source sampling locations under the Groundwater Rule (GWR).

5. The number of Routine coliform samples collected per month or quarter is determined based on the population served, as defined in the Rules for Safe Drinking Water Section 391-3-5-.23(1).

- a. Water systems that are required to collect one (1) microbiological sample per quarter:

If possible, identify at least three (3) sampling sites, each to be sampled once every third quarter. In the event of a total coliform positive sample, this system must collect three (3) routine samples during the month following the initial positive sample and would use all three (3) of the sampling sites.

For systems with only one (1) or two (2) service connections (suitable sampling taps), all three (3) samples may be collected in one (1) day. The sample site plan should clearly describe which tap(s) will be used for multiple samples.

- b. Water systems that are required to collect one (1) microbiological sample per month:

If possible, identify at least three (3) sampling sites, each to be sampled at least once every three (3) months. In the event of a total coliform positive sample, this system would return to collecting one (1) routine sample during the month following the positive sample.

- c. Water systems that are required to collect two (2) to forty (40) microbiological samples per month:

The number of sampling sites must equal two (2) times the number of required monthly samples. Each sampling site must be sampled at least once every other month. In the event of a total coliform positive sample, these systems would return to collecting the normal number of routine samples during the month following the positive sample.

For example, if a water system is scheduled to collect four (4) samples per month, this system should have eight (8) sample locations identified. Each month half of the sample locations would be used.

- d. Water systems that are required to sample more than forty (40) microbiological samples per month:

The number of sampling sites should equal three (3) times the number of required monthly samples. The sampling sites must represent the distribution system. If not, the number of sampling sites should be increased to ensure that all areas of the distribution system are sampled. Regardless of the number of sites selected, each site must be sampled at least once every three (3) months.

For example, if a water system is scheduled to collect fifty (50) samples per month, this system should have 150 sample locations identified. Each month a third of the sample locations would be used. By the end of three (3) months, all sample locations would have been tested. The process would then start over.

6. Include in your sampling site plan instructions for Repeat sampling of your system. Repeat samples must be collected from the following locations:
 - a. The tap from which the original positive coliform sample was taken,
 - b. A tap within five (5) service connections upstream, and
 - c. A tap within five (5) service connections downstream.

For systems with only one (1) or two (2) service connections (suitable sampling taps), all three (3) repeat samples may be collected in one (1) day from the limited number of sampling taps. The sample site plan should clearly describe which tap(s) will be used for multiple samples.

Systems may propose repeat monitoring locations to the State that the system believes to be representative of a pathway for contamination of the distribution system. A system may elect to specify either alternative fixed locations or criteria for selecting repeat sampling sites on a situational basis in a standard operating procedure (SOP) in its sample siting plan. The system must design its SOP to focus the repeat samples at locations that best verify and determine the extent of potential contamination of the distribution system area based on specific situation.

7. Include in your sampling site plan a schedule for collection of the samples and if the system is on a monthly or quarterly schedule. Samples should be collected at regular time intervals throughout the month, except that systems that use only ground water and serve 4,900 or fewer people [five (5) samples required per month or fewer] may collect all required samples on a single day if they are taken from different sites.