

## HOW TO DRAFT A BACTERIA SAMPLE SITE PLAN WITH REVISED TOTAL COLIFORM RULE

A sample site plan is a schematic of your entire water system on which is marked the sites or locations from where the routine, repeat and groundwater triggered (if applicable) bacteriological samples will be collected. It is your responsibility to report site or distribution system updates to the Department of Environment and Natural Resources as they occur.

Total coliform bacteria were chosen as the indicator of microbial water quality because they are found in many areas of the environment. When detected in a water sample, it indicates the integrity of the well or storage tank or distribution system may have been compromised in some way.

When you complete the submitter form when collecting a sample, write a complete description of the site that includes the name of the building/homeowner/business/campsite number, the address and the site #.

Follow these steps to prepare a proper microbiological sample site plan.

**Step 1.** Compile a schematic or map of your entire water system. It should include water lines, reservoirs, wells and/or other water sources. The locations of deadends are important when you start choosing routine sample sites. The map must represent the water system as it presently exists.

**Step 2.** Determine the number of routine sample sites that your system needs. Refer to the table below.

Population	# of Routine Sites	Population	# of Routine Sites
25-1000	5	4101-6700	15
1001-2500	7	6701-21500	20
2501-3300	9	21505-59000	30
3301-4100	12	>59001	40

**Step 3.** Review your water system schematic and determine where the best locations for routine sample sites. Refer to criteria below to help you choose valid locations.

- Each routine site **must** have at least one service connection both upstream and downstream from it. In other words, routine sites cannot be assigned to a last service connection/building on a water line that comes to a deadend.
- Routine sites must be evenly distributed throughout the distribution. They cannot be clustered into a small area.
- Rotate through each of the sites monthly. Do not collect all routine samples from the same site month after month.
- Sites need to be accessible at reasonable times of the day and preferably throughout the year.
- You must be able to flush the sampling tap so fresh water can be obtained for the sample.
- A tap suitable for sampling is needed – preferably a single, cold water, nonswivel tap, that can be disinfected by bleach.

**Step 4.** With a dot, plot on the map each routine site and assign them a number. Note the address of the building (or the campsite number) and what tap you intend to use at each site.

**Step 5.** With dots, plot on the map one repeat sample site that is within five service connections **downstream** of each routine sample site and one repeat sample site that is within five service connections **upstream** of each routine sample site. Assign them as upstream (U) or downstream (D) from the associated routine site number. Note the address of the building (or the campsite number) and what tap you intend to use at each site. These sites are used only after a routine sample is positive.

**Step 6.** For water systems that have their own water groundwater sources, mark the GWR triggered locations on the map. These samples are collected directly from each groundwater source prior to any treatment. These sites are used only after a routine sample is positive. Find this GWR site(s) now before a positive sample occurs!

Questions concerning your bacteria sample site plan should be directed to Barb Friedeman at 605-773-4052.