



# Total Coliform Rule

## F.A.C.T.S.H.E.E.T

**“Water systems must test for bacteria in the water supply.”**

The Total Coliform Rule was published in *The Federal Register* on June 29, 1989. It became effective December 31, 1990. This rule established microbiological standards and monitoring requirements which apply to all community and non-community water systems.

### Water Quality Standards

#### Maximum Contaminant Level Goals (MCLG): Zero

Water systems should try to achieve coliform-free water. This is a *non-enforceable* health goal.

#### Maximum Contaminant Levels (MCL): Presence/Absence of total coliforms. (Table 1)

The presence of total coliform bacteria indicates the possible presence of fecal and disease-causing bacteria. *Enforceable* standards are set for total and fecal coliforms.

**Table 1. Coliform MCLs**

# of Routine Samples/Month	Limits for Total Coliform-Positive Samples Each Month
Less than 40/mo.	No more than one sample
40/mo. or more	No more than five percent of all monthly samples.

### Monitoring Requirements

#### Routine Sampling (Table 2)

- Sampling by community water systems (CWS) is done at intervals during each month with the number of monthly samples based on the population served.
- For non-community water systems (NCWS), the number of monthly samples also depends on whether the water source used is surface water (SW), groundwater (GW) or groundwater under the direct influence of surface water (GW-UDI). Under some conditions the State may reduce the sampling frequency to no less than 1 per year.
- Unfiltered surface water systems and unfiltered groundwater systems under the direct influence of surface water must analyze one coliform sample near the first service connection each day the source water exceeds the turbidity standard.

#### Repeat Sampling

- Repeat sampling is required according to Table 3. If a routine sample is total coliform-positive, repeat sampling must be done within 24 hours of notification of a positive sample. Systems must take a certain number of repeat samples for **EACH** routine or repeat sample found to be total coliform-positive. The State may extend the 24-hr. limit but may not waive this type of repeat sampling.

**Table 2. Routine Sampling**

#### Community Systems\*

Population	Routine Samples/Mo.
25-1000.....	1
4101-4900.....	5
8501-12,900.....	10
17,201-21,500.....	20
41,001-50,000.....	50
96,001-130,000.....	100
450,001-600,00.....	210
2,270,001-3,020,000.....	420
3,960,001 or more.....	480

\*For complete listing, see the *Federal Register*.

#### Non-Community Systems

Source type	Population	Frequency
GW	≤1000	1 per qtr
GW	>1000	Same as CWS
SW		Same as CWS
GW-UDI		Same as CWS

- Small systems collecting fewer than five routine samples per month must collect five routine samples in the month following a total coliform-positive routine sample. Under some conditions, the State may waive this type of repeat sampling.
- The State may invalidate the results of total coliform-positive samples only if it determines the results are due to laboratory error or some other condition which does not reflect the actual water quality within the distribution system.

**Table 3. Repeat Sampling**

Original Routine Samples/Mo.	Repeat Samples	Routine Samples Next Mo.
1/mo.	4	5
2/mo.	3	5
3/mo.	3	5
4/mo.	3	5
5/mo. or more	3	*

\* = same as original routine frequency.

## Compliance

Systems were required to begin complying with all monitoring and analytical requirements on December 31, 1990.

- The MCL is based on the presence or absence of coliforms in a percentage of all samples taken each month. If any sample is total coliform-positive,
  - that sample must also be tested for fecal coliforms or *E. coli* AND
  - repeat samples must be taken, according to Table 3.
- The MCL is exceeded if
  - the limits given in Table 1 are exceeded, OR
  - any repeat sample is positive for fecal coliforms or *E. coli*, OR
  - a routine sample which is positive for fecal coliforms or *E. coli* is followed by a total coliform-positive repeat sample.
- If fecal coliforms or *E. coli* are detected in any total coliform-positive sample, the system must notify the State immediately.
- The State may allow a water system to forgo fecal coliform or *E. coli* testing on a case-by-case basis if the system responds to every total coliform-positive sample as if it contained fecal coliforms.

## Sanitary Surveys

Sanitary surveys are required for all systems collecting fewer than 5 samples/month. The initial surveys must be completed by June 29, 1994 for community water systems and June 29, 1999 for non-community systems. Subsequent surveys must be conducted every five years. Non-community systems using only protected, disinfected groundwater must repeat surveys every ten years.

## Variations and Exemptions

States may allow variations for systems having persistent total coliforms due to distribution system problems, but only those systems which are not at risk of fecal or pathogenic contamination will be eligible. This means there must have been no treatment lapses or deficiencies, no measured fecal or pathogenic contamination, or improper operation or maintenance of the distribution systems. No exemptions will be allowed.

## For More Information

Call the Safe Drinking Water Hotline at 1-800-426-4791