

# Tenmile Creek Focus Area

## Water Quality Status: Fecal Coliform Bacteria

September, 2022

**Background:** Clean water is a valuable resource; it is essential for human health and for the health of fish, shellfish, wildlife, and livestock. Water provides irrigation for crops and a safe place for water-based recreation. To maintain safe shellfish harvest, Washington State has developed standards for fecal bacteria in marine waters. Meeting the fecal coliform benchmarks in freshwater systems leads to satisfying the marine water standards to protect public health.

### Freshwater Benchmarks

#### Geometric Mean

Average sample contains less than:  
**100 fecal coliform/100mL**

- and -

#### 90th Percentile

Less than 10% of samples contain over:  
**200 fecal coliform/100mL**

### What are Fecal Coliform Bacteria?

Fecal coliform bacteria are found in human and animal feces. Detection in a creek is a sign that pathogens from these wastes may be polluting the water. Contact with fecal contaminated waters can result in **gastroenteritis, skin rashes, upper respiratory infections,** and other illnesses.

**E. coli are a fecal coliform bacteria**

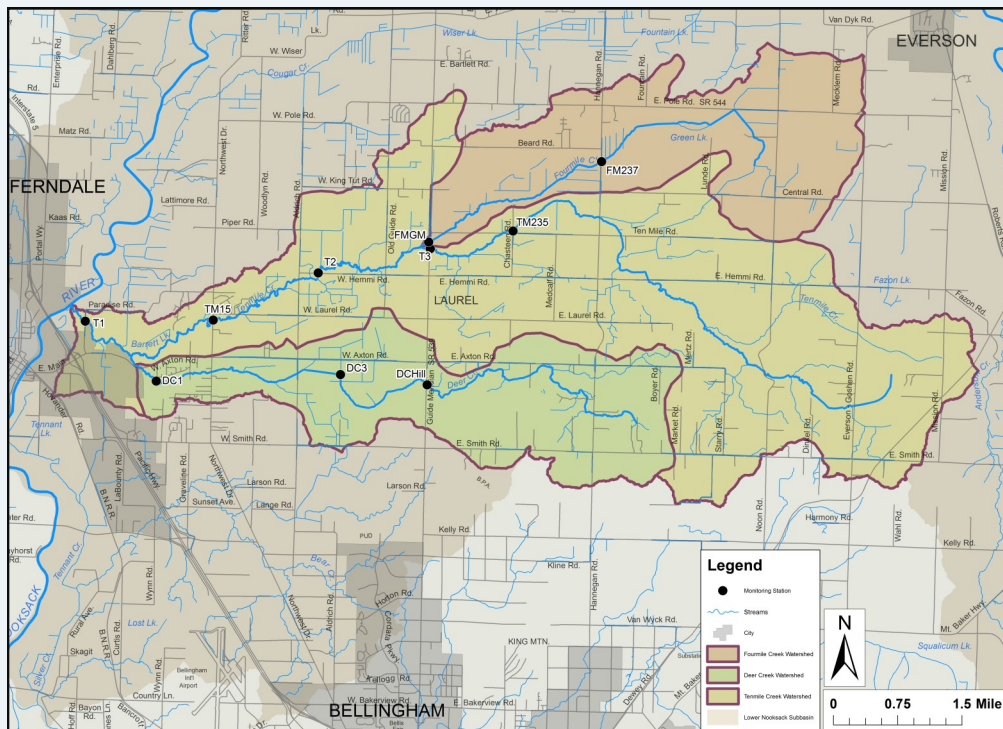
### Where Does the Bacteria Come From?

Potential sources of bacteria include:

- 1) Animal waste from livestock, domestic pets, and wildlife
- 2) Human sewage from failing septic systems, leaking sewer lines or cross-connections between sewer and stormwater systems

**Focus Area Monitoring:** The Tenmile Clean Water Project represents an effort by citizens to involve the community to reduce fecal coliform levels on a voluntary basis. The Tenmile Creek drainage includes Tenmile, Deer and Fourmile Creek. Citizen-led water quality and watershed improvement efforts occurred from 2001 to 2008, with the most recent effort initiated in 2013 which is on-going.

## Tenmile Creek Watershed Water Quality Sample Locations

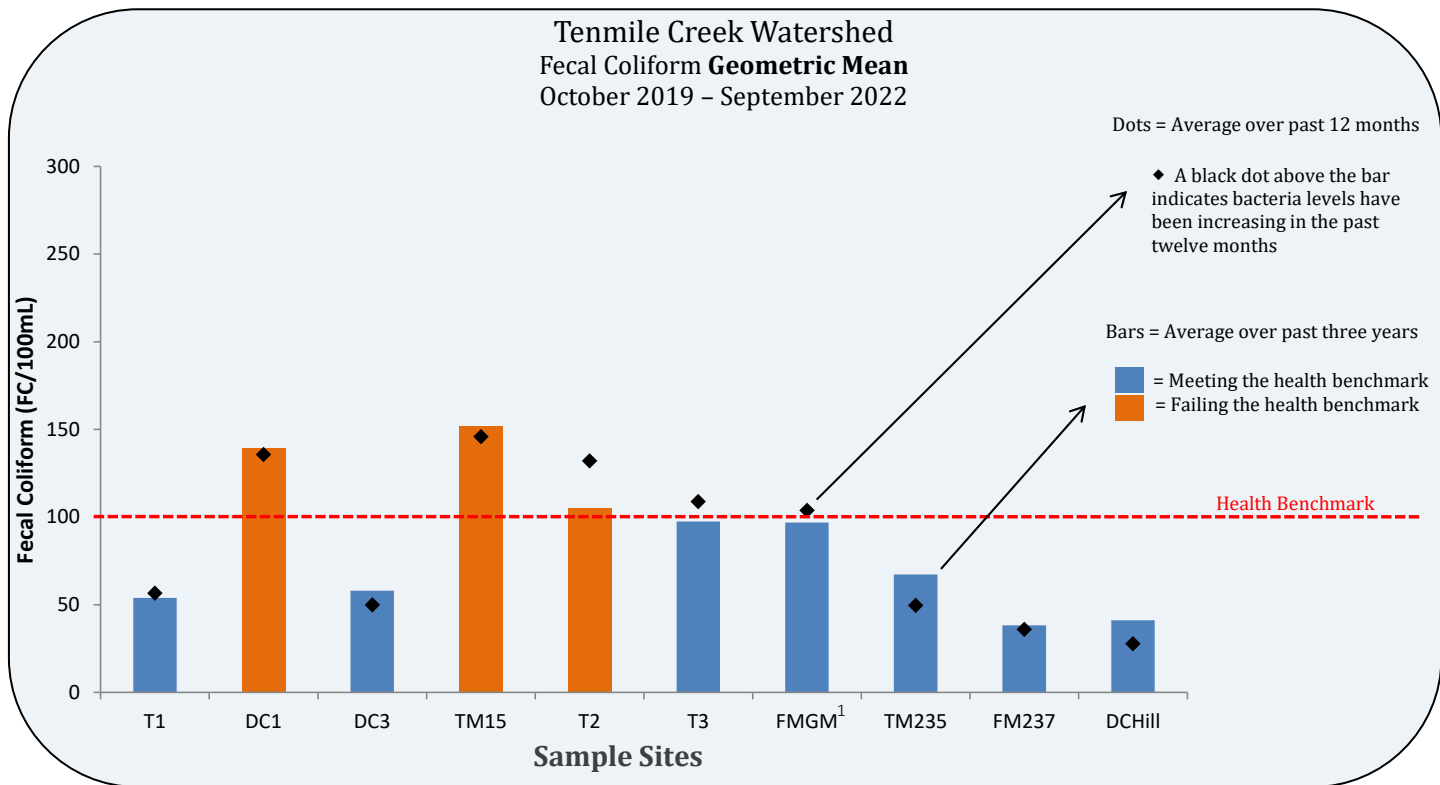


More information is available through the Tenmile Clean Water Project: <http://tenmilecleanwater.org/>  
And through the Whatcom Conservation District: <http://www.whatcomcd.org/tenmile>

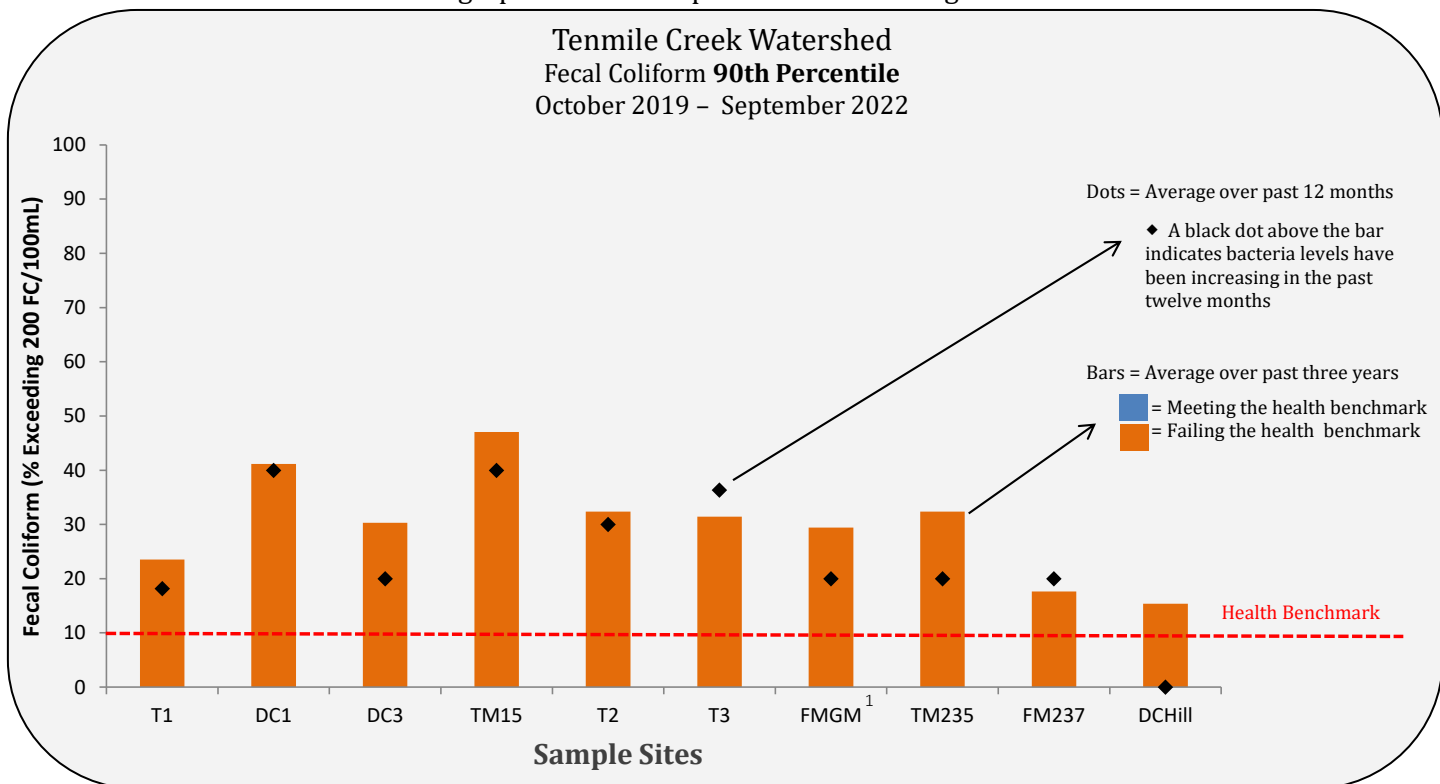
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### Comparison of Bacteria Levels to Health Benchmarks

Refer to the map on page 1 or the table on page 3 for site locations.



\*The bar must be blue on both graphs for the sample site to be meeting the freshwater health benchmark.



<sup>1</sup>Data from site FMGM has been collected since December 2018

## Tenmile Creek Focus Area Historical Fecal Coliform Bacteria Data in FC/100mL

These tables provides the individual results at each station for the last thirteen months.

Results in light orange exceeded 200 FC/100mL. Results in dark orange exceed 1000 FC/100mL.

| Creek<br>Access<br>Point | <i>Barrett<br/>Road,<br/>Tenmile</i> | <i>Deer Creek<br/>Drive, Deer</i> | <i>Axton Road,<br/>Deer</i> | <i>Northwest<br/>Drive,<br/>Tenmile</i> | <i>Hemmi,<br/>Tenmile</i> | <i>Guide<br/>Meridian,<br/>Tenmile</i> | <i>Guide<br/>Meridian,<br/>Fourmile</i> | <i>Chasteen<br/>Road,<br/>Tenmile</i> | <i>Hannegan<br/>Road,<br/>Fourmile</i> | <i>Guide<br/>Meridian,<br/>Deer</i> |
|--------------------------|--------------------------------------|-----------------------------------|-----------------------------|---|---------------------------|--|---|---------------------------------------|--|-------------------------------------|
| Date                     | T1                                   | DC1                               | DC3                         | TM15                                    | T2                        | T3                                     | FMGM                                    | TM235                                 | FM237                                  | DCHill                              |
| 9/14/21                  | 210                                  | 114                               | 64                          | 390                                     | 440                       | 400                                    | 370                                     | 310                                   | 127                                    | TNS                                 |
| 10/11/21                 | 20                                   | 82                                | 109                         | 164                                     | 145                       | 116                                    | 31                                      | 11                                    | 26                                     | 200                                 |
| 11/2/21                  | 8                                    | TNS                               | TNS                         | TNS                                     | TNS                       | TNS                                    | TNS                                     | TNS                                   | TNS                                    | TNS                                 |
| 12/13/21                 | 20                                   | 21                                | 23                          | 33                                      | 25                        | 52                                     | 46                                      | 48                                    | 44                                     | 20                                  |
| 1/10/22                  | 182                                  | 46                                | 11                          | 116                                     | 164                       | 350                                    | 64                                      | 700                                   | 8                                      | 42                                  |
| 2/9/22                   | 13                                   | 114                               | 20                          | 29                                      | 13                        | 15                                     | 15                                      | 9                                     | 7                                      | 15                                  |
| 3/14/22                  | 13                                   | 290                               | 25                          | 88                                      | 25                        | 39                                     | 25                                      | 10                                    | 7                                      | 18                                  |
| 4/20/22                  | 52                                   | 112                               | 7                           | 440                                     | 5500                      | 36                                     | 6000                                    | 21                                    | 31                                     | 62                                  |
| 5/18/22                  | 49                                   | 90                                | 64                          | 102                                     | 91                        | 118                                    | 80                                      | 78                                    | 33                                     | 64                                  |
| 6/13/22                  | 88                                   | TNS                               | TNS                         | TNS                                     | TNS                       | 90                                     | 109                                     | TNS                                   | TNS                                    | TNS                                 |
| 7/14/22                  | 220                                  | 310                               | 84                          | 310                                     | 200                       | 320                                    | 173                                     | 220                                   | 90                                     | 2                                   |
| 8/8/22                   | 145                                  | 600                               | 330                         | 700                                     | 280                       | 560                                    | 470                                     | 40                                    | 300                                    | D                                   |
| 9/6/22                   | 220                                  | 430                               | 570                         | 280                                     | 300                       | 300                                    | MIS                                     | 191                                   | 290                                    | D                                   |

Gray box indicates an event where no sample was collected for varying reasons. D-Dry, TNS-Temporarily Not Sampling, MIS-Missing

Data were collected by Tenmile Clean Water Project volunteers.