The Town of Fort Frances	**SECTION** OPERATIONS AND FACILITIES
STANDARD OPERATING PROCEDURE FOR BACTERIOLOGICAL TESTING FOR WATER MAINS **POLICY**	**REVISED** July 2004
Resolution No. 305 07/26	Supercedes Resolution No.
Policy Number 4.11	**PAGE 1 of 2**

1. PURPOSE:

To provide a procedure which outlines the events and responsibilities of Town employees for bacteriological testing.

2. RESPONSIBILITY:

All individuals in the Operations & Facilities Division workforce, at all levels and functions, are responsible for understanding and carrying out the responsibilities and duties outlined in the policy.

3. PROCEDURE:

A. GENERAL:

i. This Best Practice have been developed after review and taking into consideration of the Best Practices developed in the industry by the following organizations: Water Environmental Federation (WEF), American Water Works Association (AWWA), Ontario Water Works Association (OWWA), National Research Council (NRC) and the Canadian Water and Wastewater Association.

ii. The potential for water-borne disease arises when water is polluted with bacteria contaminates. Polluted water may contain pathogenic (disease-causing) bacteria, viruses, or other micro-organisms. Their presence indicates contamination of the water and could potentially cause sickness or even death to consumers drinking it. Therefore all water mains are to be free of coliform bacteria contamination before being put into service.

iii. Notify the Water Treatment Plant Operator(s) of any bacteriological testing for water mains.

B. GUIDELINE:

i. Once a new pipeline, water mains taken out of service for inspection, repairs as well as after swabbing or pigging operations have been disinfected and flushed, it should then be refilled with the water from your distribution system and bacti testing done to ensure adequate disinfection has occurred.

ii. Several samples should be taken depending on the length of pipe that has been installed or repaired.

iii. On ***new water mains***, sampling should be taken 24 hours apart to ensure no growth in the pipe and one set of samples shall be taken for every 1,200 ft. (366 m) of water main plus one set from the end of the line.

iv. If results come back negative, then you have an indication that you system is in fact safe and have been properly disinfected.

v. If results are positive, you should immediately resample to ensure first samples are accurate.

vi. If these samples are again positive then the pipeline will be required to be re-flushed and sampled.

vii. If this fails to produce negative samples then the water main will require to be disinfected again.

viii. After any ***repair work and/or swabbing or pigging operations*** four (4) water distribution bacteriological samples will be taken immediately at the disinfected section of the water distribution system.

- Upstream of the disinfected water main
- Downstream of the disinfected water main
- Two(2) from water services connection within the disinfected water main
  - These water samples will be sent to an accredited laboratory for analyzes. Presently, the accredited laboratory is Enviro-Test in Thunder Bay.
  - The water distribution operator in the water distribution logbook will log all pertinent information regarding the bacteriological test results (See Appendix F; Water Main Disinfection Report).

For further information please refer ANSI/AWWA C651-99 “Disinfecting Water Mains”