

Water Quality Fact Sheet: Physical Parameters

The Province of Newfoundland and Labrador has established drinking water guidelines based on Health Canada's *Guidelines for Canadian Drinking Water Quality* (GCDWQ). Source water and tap water are routinely sampled and analyzed by the Province, and compared with the Maximum Acceptable Concentration (MAC).

Water quality guidelines for physical parameters are generally established based on aesthetic or treatment process operational considerations. This fact sheet describes some common physical parameters that are used to monitor drinking water quality in Newfoundland and Labrador.

- **Turbidity:** is a measurement of the relative clarity or cloudiness of water, caused by inorganic or organic matter, including microorganisms. The GCDWQ place turbidity in the microbiological group as microorganism in water with elevated turbidity may be shielded from disinfection. Elevated turbidity levels in drinking water can indicate issues with the efficacy of the water treatment process, and indicate a potential risk of pathogens in the water. MAC: 1.0 NTU.
- **Colour:** indicates presence of natural organic or inorganic matter in water, and, along with a change in turbidity, may be the first indication of a water quality issue. Matter causing colour may be aesthetically unpleasant and may indicate the presence of pathogens in the water. MAC: 15 TCU (aesthetic guideline).
- **pH:** is a measure of the acidity or alkalinity of water. The pH scale ranges from 0 to 14. Surface waters typically have a pH of lower than 7, while groundwaters typically have a pH of higher than 7. MAC: 6.5-8.5 (aesthetic guideline).
- **Total Dissolved Solids (TDS):** is a measurement that incorporates parameters such as calcium, magnesium, sodium, carbonate, chloride, and sulphate. High concentrations of TDS in drinking water may cause unpleasant taste and pipe incrustation. MAC: 500 mg/L.
- **Dissolved Organic Carbon (DOC):** is a measurement of the organic matter dissolved in water. High concentrations of DOC react with chlorine to form disinfection by-products (DBPs) such as trihalomethanes and haloacetic acids, and may cause unpleasant taste, odour, and colour. There is no guideline for DOC, however, concentrations greater than 5 mg/L are often associated with elevated DBPs, and taste and odour issues.