

# MEMORANDUM

**To:** Mayor Kogon and Members of Amherst Town Council

**From:** Jason MacDonald, Deputy CAO

**Date:** November 19, 2018

**Subject:** **Fluoridation of Water Supply**

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This memo summarizes relevant information to be considered regarding the logistics of the potential for the Amherst Water Utility to fluoridate the water supply.

## **Issue**

Amherst Town Council received a presentation from members of the local community regarding the benefits of fluoridation of the water supply.

Fluoridation is a decision by individual municipal councils / water utilities. Fluoridation is not governed by the Department of the Environment or the Utility Review Board. This is a public health issue, and not a water treatment / water supply issue, therefore this memo will only provide information on the logistics of fluoridation.

## **Authority**

Fluoridation is not required by Department of the Environment, however should a water utility decide to fluoridate, the Department will monitor concentration levels to ensure public safety.

Fluoridation is not regulated by the Nova Scotia Utility Review Board and does not require consultation with the Board as long as capital costs stay under \$250,000 and yearly operating costs do not impact utility rates.

The American Water Works Association is the recognized educational authority with regards to the water industry, Amherst is a member of this Association which has a position statement in which they support fluoridation.

## **Infrastructure Requirements**

There are two very different methods of introducing fluoride into municipal water systems; a liquid system which requires a metering pump, or a powder system which requires a hopper with vibrator, mixing tank c/w mixer, scale, metering pump and PRV. Either system can be used with our current infrastructure. Preliminary research indicates that the liquid injection system is the most reliable and safest of the two options and therefore this memo will focus on the liquid injection option. Either system will require a fluoride monitor connected to our remote monitoring system (SCADA).

## **Financial Impacts**

### Fluoridation Equipment – Liquid injection

#### Capital Costs

Injection Equipment	\$ 30,000
Fluoridation monitoring equipment	\$ 15,000
Scada monitoring programming	\$ 5,000

#### Operational Costs

Monthly consumable costs (\$1,000 x 12)	\$ 12,000
Annual Maintenance costs	\$ 5,000

A detailed financial analysis has not been undertaken, however our water utility consultant, Gerry Isenor, has indicated that the above costs will not significantly impact our current water rates.

## **Other Issues**

### Hazardous Materials

Fluoridating agents used are dangerous goods (hazardous materials) and the design, construction and operation of equipment to receive, store and introduce the agent into the treated water requires risk assessments for worker occupational health and safety issues and for the environment of and around the plant. Contingency plans are required. Close monitoring of the presence (concentration) of fluoride in the treated water is also required.

### Fluoridation by Other Municipalities

Moncton	No
Truro	No
New Glasgow	Yes
CBRM	Yes
Windsor	No – Stopped in 2002
Antigonish	No – stopped in 1980s
HRM	Yes

### Taste

The addition of any substance to the water has the possibility of affecting the taste of the water.