



## STAFF REPORT TO COUNCIL ENGINEERING and PUBLIC WORKS

1100 Patricia Boulevard, Prince George, B.C., V2L 3V9

**DATE:** SEPTEMBER 4, 2015  
**TO:** MAYOR AND COUNCIL  
**FROM:** DAVE DYER, GENERAL MANAGER, ENGINEERING AND PUBLIC WORKS  
**SUBJECT:** UPDATE- Fluoride Injection Systems Removal from Water Pumpstations  
**ATTACHMENT(S):** N/A

### RECOMMENDATION(S):

1. THAT Council receive this report for information.

### PURPOSE:

This report provides an overview and costs of dismantling of all of the City's fluoride injection systems, which were located at four (4) of the City's water pumpstations.

### BACKGROUND:

At the December 1, 2014 City Council meeting, Council received a report on the civic election results, which included the results of the community opinion referendum question on fluoride. A majority of voters, 53.72%, were not in favour of the City of Prince George fluoridating its water supply. At its meeting of December 15, 2014, Council voted unanimously to shut off the City's fluoride injection system. City staff proceeded with Council direction on Dec 16, 2014, when all of the fluoride injection systems were taken off line and isolated. Residual fluoride in the City's distribution system was monitored by sampling the drinking water and by Dec 22, 2014, the results from the last samples were at a level of naturally occurring fluoride in Prince George's groundwater.

By March 5, 2015, the injection equipment, including pumps, injectors, piping, and valves were removed and disposed of from all of the water pumpstations that contained fluoride injection. There were four (4) stations in total. Photos are provided below at each of the four stations showing the removal of the equipment.

A total of 9300 litres of fluorosilicic acid, distributed over the four pumpstations, was remaining in the holding tanks on the day that the fluoride injection systems were shut down. Fluorosilicic acid is a toxic and hazardous material when stored in bulk at the concentrations in the tanks. The process of removal and neutralization of the fluorosilicic acid must be performed by a professional with experience and knowledge in handling this type of product. Once the product is removed from the day and bulk tanks and the tanks are cleaned, removing the tanks will be difficult and costly as in some cases the tanks will need to be cut up for removal from the pump

stations. Alternatively, the tanks can remain in place until a major upgrade of the station is completed or the tanks possibly could be used for other products such as chlorine.

**PW 601 Wilson Park East Well**  
Fluoride Injection System Equipment Removed



**PW 605 Wilson Park West Well**  
Fluoride Injection System Equipment Removed



**PW 660 Fishtrap Well**  
Fluoride Injection System Equipment Removed



**PW 624 College Heights Well**  
Fluoride Injection System Equipment Removed



#### **FINANCIAL CONSIDERATIONS:**

The City has received a quote of \$140,000 to remove the fluorosilicic acid from the storage tanks. This includes neutralization and removal of the remaining fluoride with a vacuum truck and transport for disposal from each of the four (4) water pumpstations. In some cases scaffolding must be erected for worker safety. City staff is working with the removal company to reduce this cost by coordinating the work with projects the company is lining up for other customers. It is planned to have the fluorosilicic acid removed by early November 2015.

The preliminary estimated cost to dismantle and remove the fluoride bulk storage and the day tanks is about \$60,000. This will be further investigated once the fluorosilicic acid is removed.

Funding for this work will be absorbed in the Water Utility Operating budget by deferring selected maintenance activities and upgrades to future years.

**SUMMARY AND CONCLUSION:**

The City of Prince George has not injected fluoride into the water supply since December 16, 2014 and has removed all of the fluoride injection equipment at each of the four pump stations. A total of approximately 9300 litres of fluorosilicic acid remains in the tanks which is estimated to cost up to \$140,000 to remove by a contractor with the expertise and certification to neutralize, remove, transport, and dispose of the product. It is expected that the product will be removed by early November, 2015.

Removal of the tanks is estimated to cost about \$60,000, though an alternative is to delay the removal of the tanks until a later date during a major upgrade of the pumpstations.

**Respectfully submitted:**



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Dave Dyer, General Manager of Engineering and Public Works

To: Mayor and Council

