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**REPORT TO THE REGIONAL WATER SUPPLY COMMISSION
MEETING OF WEDNESDAY, JUNE 16, 2010**

SUBJECT 2009 ANNUAL DISINFECTION BY-PRODUCTS SUMMARY OF GREATER VICTORIA'S DRINKING WATER

PURPOSE

To provide detailed disinfection by-products data for the Greater Victoria Drinking Water System to the public as required by regulation.

BACKGROUND

The *2009 Annual Disinfection By-Products Summary of Greater Victoria's Drinking Water* is the third report in the Water Quality Division's 2009 annual report series. It extends the disinfectant and disinfection by-products information provided in the *2009 Annual Overview of Greater Victoria's Drinking Water Quality* and details the disinfection by-products results across the Greater Victoria Drinking Water System.

Water Quality Division staff post the annual reports and water quality data tables at the following CRD website locations:

- <http://www.crd.bc.ca/water/waterquality/annualreports.htm>
- <http://www.crd.bc.ca/water/waterquality/datatables.htm>

The executive summary and selected charts from the *2009 Annual Disinfection By-Products Summary of Greater Victoria's Drinking Water* are attached. The full report is posted on the CRD website listed above.

RECOMMENDATION

That the Regional Water Supply Commission receive this staff report for information.

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2009 Annual Disinfection By-Products Summary of Greater Victoria's Drinking Water

(Executive Summary and Selected Charts Only)

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June 1, 2010

ENVIRONMENTAL SUSTAINABILITY
CAPITAL REGIONAL DISTRICT
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Executive Summary

The *2009 Annual Disinfection By-Products Summary of Greater Victoria's Drinking Water* is the third report in the Water Quality Division's 2009 annual report series. It extends the disinfectant and disinfection by-products information provided in the *2009 Annual Overview of Greater Victoria's Drinking Water Quality* and details the disinfection by-products results across the Greater Victoria Drinking Water System.

The primary observations and conclusions contained in this report are listed below:

1. **Overall Summary.** In general, while low to moderate concentrations of disinfection by-products continue to be detected in the Greater Victoria Drinking Water System, the majority of the values were well within the limits of the Canadian Guidelines and the quality of the drinking water in Greater Victoria in 2009 continued to be very good.
2. **Trihalomethanes.** In 2009, the average concentration of total trihalomethanes (TTHMs) in the Greater Victoria Drinking Water System was 21.3 µg/L. This is well below the limit of 100 µg/L in the *Guidelines for Canadian Drinking Water Quality* and also below the USEPA maximum contaminant level (MCL) of 80 µg/L (**Figure 2**). However, one location, Upper Dean Park Reservoir, which was subject to seasonal re-chlorination and supplies drinking water to a small service area within the Dean Park subdivision, had higher concentrations of TTHMs (**Figure 2**). Chloroform was the predominant type of trihalomethane detected.

As expected, during the period of time since the rechlorination ceased at the Deep Cove Pump Station in North Saanich in 2007, the levels of TTHMs at Cloake Hill Reservoir and its service area dropped significantly (**Figure 4**) without any significant increase in bacterial numbers.

3. **Haloacetic Acids.** In 2009, the average concentration of haloacetic acids (HAAs) in the Greater Victoria Drinking Water System was 16.4 µg/L. This is well below both the USEPA maximum contaminant level (MCL) of 60 µg/L and the newly established limit of 80 µg/L (set in July 2008) in the *Guidelines for Canadian Drinking Water Quality*. As was the case for trihalomethanes, the concentration of haloacetic acids was elevated in Upper Dean Park Reservoir with one value exceeding the Limits (**Figure 6**).

As expected, stopping rechlorination at the Deep Cove Pump Station in North Saanich caused a significant decrease in the levels of haloacetic acids at Cloake Hill Reservoir (**Figure 8**).



